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SERVICE INTEGRATION FOR MULTI-RISK PATIENTS

Final Report

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Centro del Barrio -- San Antonio, TX
Clinica Sierra Vista -- Lamont, California
Great Brook Valley Health Center -- Worcester, MA
Maricopa County Dept. of Public Health and Maricopa County Health System -- Phoenix, AZ
Multnomah County Health Department -- Portland, OR
William F. Ryan Community Health Center -- New York, NY

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Recommendations. BPHC could clarify definitions of "documentation" and of "homeless users" and encourage agencies to reduce duplicative information obtained during intake. BPHC could work within DHHS, and with other federal agencies and states, to reduce differences in definitions and reporting requirements.

II. Integrating Multiple Categorical Grants

All of the agencies participating in this study package funds from multiple sources to meet the needs of their multi-risk clients. Packaging resources has an unavoidable corollary -- patients with similar needs may receive a different mix of services. For example, the CPCP and SIMRI programs have slightly different service and eligibility provisions and can target different sub-groups of pregnant women. An individual Hispanic woman may have the same risks as an African-American woman, but limited SIMRI resources might preclude her from enrollment in this program, particularly if the grant application originally focused on reducing infant mortality among African-American women..

Recommendations: BPHC could examine ways of reducing the effect of definitional differences among special population grants. BPHC could explore whether an agency that targets its grant application to a discrete sub-group is legally *required* to restrict services to that population during program implementation. Agencies with multiple grants could be encouraged to assess the effect of the interaction of eligibility provisions.

III. Clinical Organization to Address Patient Needs

A "service integration chart review, " drawing on both medical records and case management notes, identifies key elements of service integration. Documentating "address" on every visit enhances follow-up, particularly for the homeless. Chart reviews also indicated that

intensive efforts were required to get some pregnant patients to agree to HIV-testing and that there are variations in screening for tuberculosis and streptococcal infection among pregnant women. Finally, statutory requirements regarding confidentiality of HIV-test results constrain the ability to exchange essential medical information, even within an agency.

Recommendations. Elements of a "service integration review" might be included in the PCER. PCER reviews also provide the vehicle for determining the extent of screening for tuberculosis and streptococcal infections. BPHC could assess state confidentiality statutes regarding HIV care, the extent to which they impede integrating records and/or sharing information among providers, and realistic alternatives for agencies.

IV. Patient Records and Management Information Systems

Site-based information systems involve separate intakes and assessments, patient identifiers and charts maintained at each clinic. Agency-based systems have a single intake process, unique identifiers and share information across sites through an MIS. While the site-based systems can be effective at coordinating services for individual patients, they have greater potential for discontinuities. The greatest argument against converting site-based approaches to agency-based systems is the cost of change.

Recommendations. Rather than redesigning current systems, BPHC could explore methods of linking patient information in existing site-based systems. Major vendors might be asked to develop algorithms that link records using (1) name; (2) birthdate and (3) social security number -- the three elements commonly used to link records in national databases. Insurance identifier (e.g., Medicaid number) could be used to link data for some, though not all, patients.

V. Funding Essential Support Services

In some instances, multi-risk patients receive more comprehensive care than other uninsured individuals, because the special population grants cover enhanced services and case management. Limited availability of behavioral health services constituted a major service gap. Agencies particularly highlighted key shortages of mental health, counseling and substance abuse treatment services.

Recommend&ions. BPHC could work with SAMSHA to explore new ways of linking their resources, building on the "shared program" model applied under the Linkage-Primary Care/Substance Abuse Treatment program. BPHC could also examine the extent of the "service gap" for multi-risk patients to document necessity for including adequate coverage for behavioral health services in managed care plans.

VI. Information Dissemination and Technical Assistance

Agencies appear to think about service integration on a patient-by-patient basis, not as a systemic issue. Most have limited information on the extent to which their patients use multiple programs and equally limited knowledge of how other agencies handle service integration questions. While agencies are currently focused on immediate managed care issues (e.g., level of primary care capitation rates), they will have to address other questions specific to the special populations as Medicaid managed care matures.

Recommendations. BPHC can foster attention to coordination issues by disseminating "best practice" and case study information. Dissemination should highlight "how-to" information and specific agency approaches, as these seem to be most useful to agencies involved in day-to-day operations. BPHC could also analyze the prevalence of "multi-program/multi-risk" patients (perhaps using new UDS data), both to determine the "true" extent of the problem and to target technical assistance. Finally, BPHC could assist agencies in assessing the implications of managed care for integrating services to multi-risk patients. The experience of agencies who have been providing care to multi-risk patients in a capitated environment would be invaluable to others seeking to address these complex questions.

SERVICE INTEGRATION FOR MULTI-RISK PATIENTS

EXECUTIVE SUMMARY

During the mid to late 1980's, Congress enacted various categorical programs to support the design and delivery of medical and, health-related services to specified high-risk groups -- often referred to as "special populations." These new programs reflect the overall intent of the Public Health Service Act to improve access to quality health care, but also identify particular groups of individuals for whom discrete interventions were deemed necessary to focus attention and services on their special needs. Categorical programs were established for specific, special populations -- homeless persons, at-risk pregnant women, substance abusers and HIV-positive individuals. Each of these programs provided new funding to support a specified array of services (medical and health-related) for one of the targeted populations.

Categorical funding streams can be laser-sharp in specifying that funds address a specific problem or a group of individuals who exhibit specific characteristics or a specific medical condition. In real-world situations, individual circumstances are far more complex and are not so neatly categorical. An individual, for example, may present with multiple problems (e.g., a substance abusing homeless man who is at risk of HIV-disease), or an individual's life circumstances may change (e.g., a pregnant woman, who is being abused, becomes homeless mid-way through pregnancy).

The challenge for primary care agencies is to bring together the categorical funding streams and integrate services appropriate to the multiple, overlapping and changing needs for medical, psychological and social services of special individuals. In so doing, agencies seek to leverage categorical funds, assemble the requisite continuum of services, and organize patient care to achieve timely access and care continuity.

I. Study Objectives and Methods

In the fall of 1995, the Bureau of Primary Health Care (BPHC) initiated a study to examine the scope of service integration within community-based organizations that receive multiple categorical grants for vulnerable, special populations.[1] The study objectives are:

- describe how selected agencies address common problems and challenges in achieving service integration;

[1] The authors of the study report are: Deborah Lewis-Idema (Project Director), Cheryl Ulmer, Marilyn Falik, Tanya Pagan Raggio, and Peter Stoessel.

- explore lessons learned from these projects' experiences regarding approaches to developing and organizing coordinated care systems; and

- identify factors that promote or impede service integration to assist BPHC in reducing barriers and improving agency capacity to integrate services for multi-risk patients.

Key Definitions

The terms *multi-risk patient* and *service integration* can have various meanings. For the purposes of this study:

- A *multi-risk patient* is defined as "one who, due to medical condition or life circumstances, requires (and may be eligible for) services supported by at least two of the special population programs." Readers should note that this is an operational definition, centered on use of a particular categorical program, rather than a clinical definition. Indeed, we might have more accurately described the patients as "multi-risk/multi-program" -- but chose to use "multi-risk" largely for purposes of readability.

- *Service integration* is defined as "a method of providing patient care that has an identified locus of responsibility for assuring coordination across a spectrum of categorically-funded services to address patient medical, psychosocial and enabling service needs." Because the project centered on how agencies act to achieve service integration, we opted for a definition that centers on methods for assuring coordination, and we looked for evidence of a "closed loop" -- referrals made, appropriate services rendered, and documentation of services delivered in patient records.

The following terms are used to describe entities examined in the project:

- *Agency* - This is the entity which received the categorical grants; an agency may operate multiple programs and have multiple sites.

- *Program(s)* - This term applies to categorical programs (e.g., HIV, Homeless, Pregnancy Outcome, Linkage, Public Housing) operated by the agency; these programs may be fully or partially funded by BPHC categorical grants.

- Site(s) - These are physical locations where the agency provides services; an individual site may be dedicated to a single program (e.g., HIV) or may have a combination (e.g., CPCP and Linkage).

In addition to core primary care support through Community Health Center (Section 330) grants, categorical programs of interest to this study include:

- Comprehensive Perinatal Care Program (CPCP) and Special Infant Mortality Reduction Initiative (SIMRI) supplemental funds for enhanced perinatal care services;
- Health Care for the Homeless (HCH) and Health Care for Homeless Children funds for targeted services to the homeless;
- HIV-Early Intervention Program (Ryan White Title IIIb) funds for early diagnostic and preventive services to persons with (or at risk of) HIV-disease;
- Primary Care - Substance Abuse Treatment Linkage programs (Linkage) that support services to integrate substance abuse and primary care services; and
- Public Housing Primary Care (PHPC) funding to support services to residents of public housing projects.

Study Participants

This is an exploratory study of service integration approaches, drawing on information from six case studies. The initial design called for examining six multi-funded agencies that were receiving at least two of the four main BPHC-supported special population grants (e.g., HCH, CPCP/SIMRI, Ryan White IIIb, and Linkage). We sought a geographic mix of agencies that differed by size of caseload and mix of grants received. The study participants are:

- Centro del Barrio, San Antonio, TX -- a CHC serving urban and rural populations with funding under both Health Care for the Homeless and Health Care for Homeless Children as well as CPCP and Ryan White IIIb.
- Clinica Sierra Vista, Lamont, CA -- a large multi-site agency, serving urban, rural and geographically-isolated communities spread over two counties, with CHC and Migrant Health Center funds and special population programs (CPCP, SIMRI, HIV and Health Care for the Homeless).
- Great Brook Valley Health Center, Worcester, MA -- a CHC operating in a mid-size urban area with Public Housing Primary Care and CPCP funds.
- Maricopa County Department of Public Health and Maricopa County Health System, Phoenix, AZ -- a county government with multiple special population grants (HIV, Linkage and Health Care for the Homeless) and no CHC funding serving two counties spanning urban and rural environments.

- Multnomah County Health Department, Portland, OR -- a county-wide health department with CHC and special population funding (CPCP, HIV, Linkage, Health Care for the Homeless and Homeless Children).

- William F. Ryan, New York City, NY -- a CHC in a large complex urban environment with funding under three major programs (CPCP/Homeless/HIV).

Data Collection Methods .

Prior to site visits, the project teams reviewed written materials for each of the special population grant programs (e.g., authorizing legislation, grant application package, reporting formats) and agency-specific information (e.g., grant application, BCRR data). The two-day site visits occurred between January-May, 1996. Each three-person team included expertise in both primary care program management and clinical issues. A consultant physician participated in every site visit. Interviews were conducted with key decision-makers (e.g., Executive Director, Medical Director, Director(s) of individual special population programs); administrative personnel (e.g., finance, intake-registration); and patient care staff (e.g., case managers, nurses, mid-levels, physicians).

The major interview topics included organizational arrangements, strategic planning, management information systems, financial systems, coordination of clinical services across programs, organization of special population programs, coordination of care for individual patients, and agency definitions of integrated services. Detailed inquiry covered specific constraints or barriers imposed by BPHC reporting requirements or other legislative and regulatory requirements. In addition to staff interviews and statistical data, project team members reviewed sample patient records and held informal discussions with patients.

II. Characterizing an Integrated Service Delivery System

Service integration has many facets and describing an integrated system of care is reminiscent of the parable regarding the blind men and the elephant. The description depends upon one's perspective. This assessment explored service integration for multi-risk patients from three distinct perspectives, each of which offers insights into the nature of integrated delivery systems.

Delivery System Perspective

Organizational structures define the outlines of an integrated care system. While three organizational prototypes emerged from the study, agencies often combined elements from these prototypes, to create unique delivery systems appropriate to their environments and patient needs. **Each provides a structure that can support and foster development of integrated services for complex patients, but each prototype offers different strengths and weaknesses.**

- Because the ***unitary*** prototype integrates all services in a single location, both for its general and special populations, it offers strong potential for maximizing use of a common staff and intra-agency communications. Pragmatically, this approach may be appropriate only for agencies in circumscribed geographic areas. Even in these instances, it may not be the most effective manner of organizing homeless services, unless the agency's principal clinic site is located near areas where the homeless tend to congregate.

- A ***hub-and-spoke*** approach integrates multiple clinics (primary care as well as special population outreach sites) with the resources and staff housed at a central location, and links patient information among all sites. Management information systems are used to enhance communication among sites and with the central core. However, if this information sharing is limited to minimal registration information, rather than more substantive clinical information, coordination for individual patients may ultimately depend on personal relations and case management.

- The ***linear*** prototype integrates care for individual patients in multiple primary care and special population programs through case management and staff networks, not management information systems. In this study, the prototype was observed among agencies whose service responsibilities cover entire county or multi-county areas, and whose management information systems tended to be less sophisticated. Since the approach relies on personal relationships across sites and with patients, it is potentially vulnerable to discontinuities when staff turnover occurs. Successful implementation requires good methods for transition in these circumstances.

Among these agencies, each special population program had a distinct organizational structure appropriate to its defined target population. All the homeless programs operated out of distinct sites, either in or near shelter locations. While HIV programs operated out of separate sites or were integrated with a general primary care program, none was housed at the same location as a homeless program. All but one of the perinatal programs operated in conjunction with general primary care, as did the one public housing program included in the study. The Linkage-Primary Care/Substance Abuse Treatment program also tended to operate separately in the most linear prototype, but served as part of the "glue" to tie together other programs.

Separate structures and physical locations do not mean that programs operate in isolation from each other. Indeed, every agency had evolved intricate systems for sharing responsibilities and information about patient care. For complex cases (e.g., a pregnant HIV-positive woman), case managers work together, combining their expertise to provide more comprehensive, coordinated care to the patient. Agencies used multi-disciplinary teams, cross-training, internal referrals and rotation of personnel to extend their staff capability and maintain strong inter-site coordination in the interests of the patients. Formal and informal arrangements with numerous community organizations expand the scope of services available to patients.

Information exchange is the life-blood of coordinated care. Some of the agencies had sophisticated agency-based management information systems, with unique patient identifiers, that enable staff at one site to access registration information and clinical data on patients previously seen at another location. Others had site-based systems, with separate intakes and registration numbers, where patient information is maintained at each separate clinic location and exchanged via copies, faxes and verbal communications.

In organizing HIV services, agencies must strike a balance among complex factors -- population dispersion, diversity of patient needs, patient desires and agency philosophy. In **some instances, this balance came down on the side of fully-integrating the HIV program with general primary care; in other cases, it resulted in a distinct HIV service site.** Integrating HIV care with other primary care services would ***appear*** to be a "preferred" approach, if only because it helps to remove stigma from the disease. Many of these agencies were serving a mix of patients -- from those in very early stages of the disease to patients with full-blown AIDS. For patients in later stages of the illness, separate clinics may offer (or be perceived to offer) more up-to-date treatment options, greater opportunity for participation in clinical trials, and reduced risk of further infection. Additionally, to attract specialized personnel (e.g., an infectious disease specialist) agencies, may need a critical mass of patients at a single location, rather than having patients spread across multiple primary care clinics.

HIV service organization will likely continue to evolve, particularly in response to the changing demographics of the disease. Agencies whose caseloads are now largely male may see increasing demand for services from HIV-positive women with few outward manifestations of the disease. Facilitating access for these women may mean providing care for their (HIV-negative) children at the same location -- an event that could force reorganization of an HIV program. Conversely, other agencies may see increases in severely ill patients, and have to consider the best method of providing specialty services and avoiding risks of opportunistic infections. In short, flexibility in **Bureau policy and adaptation at the local level are the watchwords as agencies seek to respond to changing needs among patients with HIV disease.**

The Patient Perspective

Regardless of approach or organizational arrangement, one theme emerged: find the appropriate "medical home" for each patient. The type and location of that medical home depend upon the hierarchy of each patient's medical condition, co-morbidities and disease stage. Pregnancy tends to assume first priority, followed by presence of HIV disease. This order, however, is flexible and often adjusted depending upon severity of disease. For example, a substance abusing, HIV-positive client may not have any manifestations of HIV disease. For this patient, addressing the substance abuse problem may be the most immediate concern, and the agency may seek care at another community agency specializing in substance abuse treatment.

Once the hierarchy of medical needs is established, organizational attributes and patient preferences become pertinent. For example:

- **A multi-site agency often transfers HIV-positive patients to their specialized HIV program.** A homeless patient, however, may have established a relationship with staff at the homeless clinic prior to the HIV diagnosis. If maintaining that relationship is important to keeping the patient in care, the patient will continue at the homeless program, with support from the HIV staff.

- **Agencies with several grants addressing a similar medical condition will consider other social factors in planning a patient's path through the system.** A pregnant teen might be enrolled in a state-funded program for teen-age mothers because it offers more social supports and educational assistance than the general perinatal service supported by CPCP.

Mapping patient flow from intake through assignment to a "medical home" reveals a potential source of discontinuity. **Homeless patients who enter the system through the "primary care door," not the homeless program, may not be initially identified as "homeless."** At intake/registration, a patient is asked for an address; the assessment process often includes inquiry into the type of living arrangement and whether the arrangement is safe. Program staff indicated that clients do not always reveal the nature of these living arrangements, particularly in instances where a woman fears losing custody of her children. Some of the programs do not consistently pursue determination of homeless status at their primary care sites. This may stem, in part, from a natural response to limited resources (e.g., if the homeless program is already oversubscribed). Nevertheless, lack of this essential information impedes service integration and may result in loss of some important benefits to the patient.

Three themes emerged from the patient discussion groups that characterize their views of the programs and the care they receive.

- Regardless of location, method of organization or patient's medical condition, most ***patients "loved the center" -- and particularly their case managers.*** For these patients, the case manager did more than facilitate access to clinical and enabling services. **Patients see a caring, trusting relationship with the case manager that helps them to work their way through the system -- and ultimately motivates them to continue in care.** Outreach workers who are usually indigenous to the community appeared to provide added support in bringing and keeping a patient in care. Geographic accessibility and enabling sources were consistently referenced as beneficial and highly valued.

- Few patients cited specific coordination issues, perhaps because of the extreme difficulty many had experienced in accessing services prior to contacting the program. **The only instance where patients appeared aware of different**

funding streams was when they had to go through separate intake evaluations for the programs. Some patients felt that repeat intakes when they were referred to another program helped them to develop rapport and relationships with the staff.

- While patients were satisfied with their providers and the care they received, they also highlighted concerns, two of which were particularly relevant to service coordination questions. First, they disliked **double booking and waiting time,** particularly for test results and discharge after an appointment. Second, staff **turnover** can be particularly upsetting, particularly when a patient has developed a close relationship with a case manager. While patients recognized that it is impossible to eliminate turnover, they suggested more training and orientation to facilitate the transition.

The Clinical Perspective

Ultimately, the question is not how the agency organizes to achieve service integration, but rather ***whether*** patients receive the range and scope of services required. **Review of the patient record, including both medical and case management notes, by and large pointed towards coordinated care, particularly for pregnant women and HIV-positive patients; coordination for the homeless was more problematic. Charts also revealed significant physical health and social co-morbidities among these populations,** far beyond the immediate "risk" that brought them under the umbrella of our consideration.

For purposes of this review, "coordination" was defined as documentation of assessments, provision of clinical and social services according to the assessments, collaboration among practitioners, and evidence of "closed-loop internal and external referrals" (e.g., results and follow-up on referrals documented in the chart).

- ***Perinatal charts*** revealed the highest level of case management, planning, and closed loop referrals. Delivery and postpartum records were available, even in those instances where patients were delivered by hospital residents, not agency staff.

- Charts for ***HIV infected*** individuals also revealed a high degree of planning, coordination and closed loop referrals. Where medical treatment was provided through hospital personnel, the case manager's records would generally include both social services and medical information from hospitals and clinical trials. This information would then be transferred to the patient's medical record.

- ***Homeless patient*** charts were more likely to reveal difficulties in service coordination. While there was extensive documentation for persons living in transitional shelters, the charts for "street people" and transient users of health centers were leanest in terms of documenting case management and service

integration and revealed high rates of "no-shows." These charts also pointed towards extensive verbal communications among staff and with patients, perhaps reflecting both episodic contacts by patients with street outreach and case managers.

For all patients, charts showed extensive intake assessments. **Laboratory tests were the primary clinical area showing variable practice.** Tuberculosis was the only condition for which screening was not consistently conducted. There was also substantial variability in screening for streptococcal infection among pregnant women.

The chart reviews showed that eight of the 52 patients had more than one case manager. All of these patients were diagnosed HIV-positive, and four of the eight were also pregnant. Several agencies indicated that, for complex patients, assigning more than one case manager was often the most effective way to assure availability of the different (and specialized) skills acquired to address each of the risk conditions. Each patient was assigned a "primary" case manager with lead responsibility, who then drew upon assistance from case managers in other programs.

III. Managed Care and Multi-Risk Patients

The advent of managed care brings with it a host of issues for BPHC-funded providers. Depending upon how these issues are addressed, managed care could enhance -- or impede -- service integration for multi-risk patients. Although Medicaid is currently a minor contributor to financing services for multi-risk patients, mandatory Medicaid managed care is changing the marketplace and surfacing new challenges for service integration.

The "Spill-over" Effect

Managed care programs covering only AFDC populations have spill-over effects that eventually touch services to other population groups. Regardless of whether state programs bring the special populations (e.g., HIV, homeless) under the mantle of managed care, the ***managed care revolution will affect an agency's ability to provide the full scope of services required by multi-risk patients.*** Many of the agencies in this study reported that direct revenue for the special population program was insufficient to cover total costs (e.g., administrative expenses), and Section 330 dollars were used to fill in the gaps, as necessary. Early experience of some of the study agencies suggests that, in the future, agencies may face difficult choices regarding the range and scope of services available for patients ***not*** enrolled in managed care.

- ***Market share.*** Some of the agencies studied are losing Medicaid market share. Grant requirements, coupled with limited non-grant funds, constrain the ability of BPHC sponsored agencies to retain or attract patients as competition for Medicaid managed care patients intensifies (e.g., with ads on major TV stations).

- ***Change in patient mix.*** Competition from private plans can result in risk selection, with BPHC-supported providers seeing an increase in managed care enrollment among higher risk patients with greater service requirements.

- ***Capitation rates.*** Agencies are clearly concerned that current methods establish rates that are insufficient to support current services. If general capitation rates are "too low," agencies may be unable to use other grant funding as "back up" support for special population services.

Specific Issues Affecting Service Integration for Multi-risk Patients

In addition to potential overall effects, managed care brings specific implications and concerns for multi-risk patients.

- ***Setting capitation rates for high-risk populations.*** If special populations are "carved-in" to managed care -- and if payment rates do not adequately reflect severity and services required by HIV and homeless patients -- it will be difficult for agencies to continue to provide the range and scope of services now available.

- ***Coordinating behavioral health services with capitated primary care.*** Agencies may have to develop new referral networks, if behavioral services are "carved out" and administered by designated providers.

- ***Financing enabling services. The*** amount, duration and scope of services covered under a managed care program may be below the level of effort required to provide effective, coordinated services for high-risk special population patients.

- ***Enrolling special populations in managed care.*** Managed care is new to most Medicaid recipients, and confusion is likely, particularly during the early years. For high-risk populations, these problems are often compounded by language barriers, changes in residence/address, and administrative behaviors.

- ***Co-payment or premium requirements.*** Some managed care plans charge co-payments for selected services; in some states, like Oregon's waiver program, additional eligibles may enroll by paying a premium. Under the Oregon Health Plan, failure to pay the premium leads to loss of coverage, and there is 45-day waiting period prior to re-enrollment.

- ***Assuring continuity for the homeless.*** Managed care could actually increase the difficulties of integrating services for the homeless, if an enrollee who becomes homeless enters a shelter some distance from his/her usual plan. Unless patients can easily switch plans, shelter-based services may end up being provided by a

BPHC agency which does not have a contract with the patient's specific managed care plan.

If multi-risk patients are enrolled in managed care plans, and if the current providers adapt well to the competitive marketplace, service integration may benefit. *If,* on the other hand, multi-risk patients are largely uninsured (as appeared to be the case among the agencies studied for this report) and BPHC-funded agencies experience adverse selection, these agencies may have fewer resources to devote to the case management efforts essential to care coordination -- and service integration could ultimately suffer.

IV. Improving Service Integration -- Issues and Recommendations

Some of the issues impeding further improvements in service integration stem from the interface of multiple funding sources. Others stem from grafting new programs onto preexisting structures and practices.

BPHC Rules and Reporting Requirements

An observant reader of this report probably noticed that issues stemming from BPHC rules and requirements were rarely mentioned -- because **study agencies rarely highlighted BPHC program requirements as significant concerns for service integration.** Some highlighted fiscal issues, (e.g., the administrative cost limit under the Title IIIb statute, federal audit requirements, as applied to complex public systems).

Most agencies noted that BPHC requirements had improved. The Single Grant Application (SGA) simplified processes substantially. Differing reporting definitions among the BPHC programs (e.g., of applicable age groups) had posed burdens in the past, but most felt the new Uniform Data System addressed many of these difficulties.

Agencies were more concerned about differences in definitions and reporting requirements among federal agencies -- and between federal agencies and the states. To the project team, it appeared that, as BPHC reduced discrepancies among its programs, differences across federal and state agencies have become more important. Study participants recognized that these differences are probably an inevitable corollary of receipt of multiple categorical grants -- but the time and expense of multiple reports is clearly substantial.

Although BPHC rules and reporting requirements do not create distinct "barriers" to service integration, some do affect the manner in which agencies organize the process of patient care. The project team noted the following:

- Some agencies believe that ***compliance with regulations and reporting requirements is simplified if they conduct separate patient intakes and assign separate patient identifiers at each of their sites.***

- Some agencies believe that ***funding rules require that each site maintain site-specific patient information and charts.*** One interviewee specifically stated that BPHC requires a separate chart at a program to count the patient as a user. Another said that state rules required separate charts. ***Review of BPHC requirements suggests that this is a misinterpretation.*** For reporting purposes, BPHC defines a program "user" as someone who has an encounter with the program. The definition of encounters states that "services rendered must be documented" but does not say that where documentation should be physically maintained. [1]

- ***Working definitions of reporting requirements can influence the patient intake process -- and ultimately identification of a*** *patient's full* ***complement of medical and social service needs.*** ***This*** particularly applies to the homeless who access care at a site that does not have HCH funding. At these clinics, a patient's homeless or near-homeless situation is not always identified, and all agencies did not include the near-homeless in their "working definitions" for everyday intake and screening purposes. Most of these agencies did not know the number of homeless individuals served at non-HCH funded locations, a phenomenon which, if prevalent, has implications for the data to be reported on the UDS.[2]

Recommendations. To improve service integration, BPHC could encourage agencies to reduce duplicative information obtained during intake. BPHC could also reassess, and clarify as necessary, the definitions of "documentation" and of "homeless users" included in current rules and reporting requirements. To the extent possible, BPHC could work within DHHS -- and with other federal agencies and states -- to reduce differences in definitions and the effect of reporting requirements.

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[1] Uniform Data System Manual, page 6.

[2] Table 4 of the UDS requests information on all known homeless users, regardless of where the patient received care.

Integrating Multiple Categorical Grants

In a world of increasingly limited resources, every agency is forced to package funds from multiple federal and state sources to meet the complex medical and social needs of multi-risk clients. Inevitably, each grant includes a somewhat different service package and has slightly different eligibility requirements. For example, BPHC has two programs for enhanced perinatal services.

- CPCP supports enhanced services, such as intensive health education, home visits and case management, risk assessments (including a clinical nutrition and psychosocial evaluation) and childbirth education classes. CPCP funds tend to be used in conjunction with "general" perinatal care services, with medical care covered by Medicaid.

- SIMRI (Special Infant Mortality Reduction Initiative) also provides enhanced services to a target population defined by the agency in their original grant application (e.g., a small geographic area with a large African-American population). SIMRI grants may cover more intensive services than the general perinatal program -- and eligibility for case management support can be longer than Medicaid's. At the SIMRI agency in this study, eligibility continued until the child's first birthday, significantly longer than Medicaid eligibility for pregnant women.

Every agency with multiple funding must target their resources -- and inevitably "routes" patients among various programs to maximize available resources. This process, however necessary, has an unavoidable corollary -- patients with similar medical and social needs may receive a different mix of services. In the example above, an individual Hispanic woman may have the same risks as an African-American woman, but limited SIMRI resources may preclude her from enrollment in this targeted program.

Recommendations: BPHC could examine ways of reducing the effect of definitional differences among special population grants, to improve service integration. One legal issue deserving exploration is whether an agency that targets its grant application to a discrete sub-group is required to restrict services to that population during program implementation. Agencies with multiple federal and state grants could be encouraged to assess the interaction of eligibility provisions to determine whether (and how) agency practices might be modified.

Clinical Organization to Address Patient Needs

Reviewing charts for evidence of service integration is far more labor intensive than reviews that document quality of clinical care. A "service integration review" requires use of case management notes, as well as the medical record -- and the case management record tends to be

kept separately and is quite voluminous. Key elements in charts that promote service coordination include:

- ***Combining case management and clinical records in chronological order.*** Alternatively, if case management records are separate from medical charts, ***abbreviated case management notes in the*** body of the medical charts appear to enhance the comprehensiveness of care.

- Use ***and completion of flow sheets, problem and medication lists*** appear to assist with screening for preventive measures. Since many patients obtain prescriptions outside the clinic walls, medication lists can assist in preventing adverse drug interactions. Brief review of clinical and psychosocial problem lists may also enhance ability to deliver care.

- ***Documentation of tracking andfollow-up of referrals,*** both in the medical chart and in the case management notes appears to enhance close loop referrals.

- ***Sharing records,*** particularly if a patient is co-managed, appears to decrease missed opportunities, or duplication of tests and provides a broader picture of patient services (e.g., where co-managed HIV patients are also enrolled in clinical trials).

- ***Documentation of "address" on each and every visit,*** particularly for highly-mobile patients, appears to enhance ability to follow-up. This is particularly important for homeless patients, whose charts were the leanest in terms of documentation.

Statutory requirements regarding confidentiality of HIV-test results constrain the ability to exchange essential medical information, even within the agency. While all agencies went to great lengths to protect confidentiality in their systems, statutes in California and Arizona are particularly constraining on medical personnel. California law prohibits "posting" results of an HIV test in a medical chart; the California agency included test results only in the notes of the case manager who conducted the pre-post test counseling. Arizona law requires any person wishing to review the records of any HIV positive person to go through a complex review process, provisions which have limited exchange of important medical information when patients are referred between the HCH and HIV programs.

Two other clinical issues deserve mention.

- ***HIV-testing andpregnant women.*** While all the agencies followed 076 protocols, the charts clearly indicated that intensive efforts were required to get some patients to agree to the test. This has important implications, both for the level of resources required to meet BPHC's objectives in this area -- and for the likelihood of achieving targets included in the recent Ryan White legislation.

- ***Variance in screening.*** There were two conditions -- tuberculosis and streptococcal infection among pregnant women -- for which screening was not consistently conducted.

Recommendations. To focus attention on service integration issues, BPHC could consider whether elements of a "service integration review, " as defined above, might be included in the PCER. PCER reviews also provide the vehicle for determining the extent of screening for tuberculosis and streptococcal infections. Finally, BPHC could comprehensively assess state confidentiality statutes regarding HIV care, the extent to which they impede integrating records and/or sharing information among providers, and realistic alternatives for agencies.

Patient Records and Management Information Systems

Among these agencies, the intake process, records and information systems exhibited two distinct, and interconnected, patterns:

- A ***site-based approach,*** in which separate intakes and assessments occur at each distinct clinic a patient visits. Clinics maintain their own charts, usually with clinic-specific patient identifiers.

- Under an ***agency-based approach,*** patients go through a single intake process, which includes assigning a unique patient identifier used at all sites where the patient receives care. In most cases, charts are stored at one location, but patient information is accessible to all sites, either from an on-line MIS and/or copies of charts maintained at outlying sites.

Patient records and information systems have evolved over time and new systems (e.g., a newly-developed computer system) have been grafted onto older processes. Agencies with ***site-based*** systems highlighted ease of access for practitioners and simplicity in meeting reporting requirements as relevant considerations -- and cite extensive formal and informal staff communications as the critical medium of information exchange. Agencies with ***agency-based*** systems felt that access to more comprehensive data enabled them to manage individual care better and assure that patients did not "fall through the cracks. "

While agency-based systems appear to have more potential for integrating services, these apparent differences do not translate into practice. Experience with these agencies showed that site-based systems which are tied together with staff and case management networks can be just as effective at coordinating services for individual patients as agency-based networks. However, site-based systems do have greater potential for discontinuities, particularly in very large programs with numerous grants. Agency-based systems also provide consistent information across sites, useful when staff change.

The greatest argument against converting site-based approaches to agency-based systems is the cost of change. Such a conversion requires (1) reassigning all patient identifiers; (2) developing and implementing new patient intake practices; (3) retraining staff; and (4) technological computer costs. In today's fiscally constrained environment, expenditures to change these systems take low priority -- on the grounds that "if it ain't broke, don't fur it." On the other hand, systems that permit easy tracking of patients who use multiple sites may become increasingly critical to monitoring referrals under managed care.

Recommendations. Rather than redesigning current systems, agencies and BPHC might explore more effective ways of linking patient information with the basic programming and resources now in use. For instance, major vendors might be asked to assess the feasibility of using algorithms based on (1) name; (2) birthdate and (3) social security number -- the three elements commonly used to link records in national databases. Insurance identifier (e.g., Medicaid number) could be used to link data for some, though not all, patients.

Funding Essential Support Services

Availability of funds influences who obtains access -- and how much care is received. Thus, patients with third-party coverage (particularly Medicaid) and those who fit criteria applicable to a particular categorical grant received more continuous care. One interviewee characterized the difference between treatment for a 25-year old woman and that for a 49-year old.

- Because the ***25*** year-old is of reproductive age, she meets categorical program criteria, would be Medicaid-eligible if she became pregnant -- and may receive a wide variety of services.

- The 49-year old woman, even with a serious chronic condition (e.g., hypertension) is unlikely to fit categorical criteria (unless the agency has a special grant addressing hypertension). She would also be ineligible for Medicaid (unless she were receiving AFDC or SSI) -- and may receive less (if any) case management and similar services.

A variant on this problem was observed among pregnant women and children, where children born in Mexico were not eligible for Medicaid, while siblings born in the United States were eligible.

In many instances, multi-risk patients may receive more comprehensive care, because the special population grants cover enhanced services and case management that make it easier to fully integrate care. **Limited availability of behavioral health services constituted a major service gap.** Agencies particularly highlighted shortages of mental health, counseling and substance abuse treatment services in their communities. For multi-risk patients, in particular, these services are critical to addressing health problems and improving health status.

Recommendations. Insufficient funding is an endemic problem -- and all agencies face the challenge of finding ways to "do more with less." BPHC could work with SAMSHA to explore new ways of linking their resources, building on the "shared program" model applied under the Linkage-Primary Care/Substance Abuse Treatment program. BPHC could also examine the extent of the "service gap" for multi-risk patients (e.g., how many who require these services do not receive them), to document necessity for including adequate coverage for behavioral health services in managed care plans.

Information Dissemination and Technical Assistance

While all of these agencies were creative and adept at developing integrated services for individual patients, most had not looked at service integration as a systemic issue. Several interviewees commented that preparation for the site visit had led them to look at their programs from new perspectives -- and consider ways they might change their processes to improve coordination.

- Most of these agencies have **limited information on the extent to which their patients use multiple programs.** While they tend to believe that the number of patients who move among sites is relatively small, this is based on largely on an anecdotal "feel" for their programs. Since most did not know the number of homeless individuals using general primary care sites, the project team tended to believe the population might be larger, but there no clear evidence to support either view.

- Agencies have **limited knowledge of how other agencies handle service integration questions. Since** most look at coordination of care from the individual patient's perspective, the question of how their systems and processes affect integration probably rarely arises. Agencies felt that additional "how-to" information based on other agencies' experiences would be useful. One interviewee noted that middle management and patient care staff rarely have the opportunity of seeing other programs, and suggested "staff rotations" to other agencies.

The changes brought by managed care raise an entirely new set of concerns. Of necessity, most agencies are currently focused on immediate and fundamental issues (e.g., level of primary care capitation rates; system transitions required to operate effectively under managed care). As Medicaid managed care matures, agencies will also have to address issues specific to multi-risk populations and service integration (e.g., risk adjusted capitation rates; coordinating behavioral services; continuity for the homeless).

Recommendations. BPHC can foster attention to coordination issues by disseminating "best practice" and case study information, through written documents and presentations at national and regional meetings. These efforts should highlight "how-to" information and specific

agency approaches, as these seem to be most useful to agencies involved in day-today operations. BPHC could also analyze the prevalence of "multi-program/multi-risk" patients (perhaps using new UDS data), both to determine the "true" extent of the problem and to target technical assistance. Finally, BPHC could assist agencies in assessing the implications of managed care for integrating services to multi-risk patients. The experience of agencies who have been providing care to multi-risk patients in a capitated environment would be invaluable to others seeking to address these complex questions.

I. INTRODUCTION

During the mid to late 1980's, Congress enacted new categorical programs to support provision of services to identified high-risk groups -- often termed "special populations." These new programs reflect the overall intent of the Public Health Service Act to improve access to quality health care, but also identify particular groups of individuals for whom discrete interventions were deemed necessary to focus attention and services on their special needs. While the programs provide targeted and necessary funding to support services, patients do not necessarily fit into similar categories. Frequently, an individual patient presents with multiple problems (e.g., a substance-abusing pregnant woman who is at risk of HIV-disease) or experiences changes in life circumstances over time (e.g., a pregnant woman who becomes homeless mid-way through pregnancy). Thus, agencies are challenged to integrate categorical funding to provide the scope of services individual patients require in a coordinated manner.

In the Fall of 1995, the Bureau of Primary Health Care initiated a study to examine the scope of service integration within community-based agencies that receive multiple categorical grants for vulnerable, special populations.[1] Specific project objectives included:

- describing how selected agencies address common problems and challenges in achieving service integration;
- exploring lessons learned from these projects' experiences regarding approaches to developing coordinated care systems;
- identifying factors that promote or impede service integration to assist BPHC in reducing any barriers and improving integration of services for multi-risk patients.

This was an exploratory study drawing on information from six case studies. This introductory chapter discusses the scope of the project, method for selection of agencies, and data collection processes. Chapter II provides brief descriptions of the six participating agencies. Chapters III-VII explore various aspects of service integration:

- Chapter III examines delivery system organization for service integration.
- Chapter IV explores the process of patient care -- from the patient's first contact with the clinic to the point where case managers and "primary" clinical staff are assigned.

[1]The authors of the study report are: Deborah Lewis-Idema (Project Director), Cheryl Ulmer, Marilyn Falik, Tanya Pagan Raggio, and Peter Stoessel.

- Chapter V presents a clinical perspective, summarizing information drawn from chart reviews at the participating agencies.

- Chapter VI discusses the process of managing patient information -- from patient intake to data entry in management information systems.

- Chapter VII explores the role of case management and communication methods in promoting service integration.

The report concludes by looking towards the future. Chapter VIII explores implications of managed care for services to special populations, and Chapter IX summarizes major study findings, identifies issues and provides recommendations for enhancing service integration.

A. Scope of the Project

The project focused on services supported by BPHC programs, specifically:

- Community and Migrant Health Centers (Section 3301329).

- Comprehensive Perinatal Care Program (CPCP) and Special Infant Mortality Reduction Initiative (SIMRI) which provide supplemental funds for enhanced perinatal care services.

- Health Care for the Homeless and Health Care for Homeless Children funding targeted services to the homeless.

- HIV-Early Intervention Program (Ryan White Title III b) supporting early diagnostic and preventive services for persons with (or at risk of) HIV-disease.

- Primary Care - Substance Abuse Treatment Linkage programs supporting services to integrate substance abuse and primary care services.

- Public Housing Primary Care programs supporting services to residents of public housing projects.

While the BPHC grant programs were the central concern, all agencies use a mix of financial resources (e.g., Medicaid; Ryan White Titles I and II; state and local funds) to support services to high-risk populations. Early in the project, it became apparent that excluding these funding sources would provide an incomplete picture of an agency's total service configuration and, hence, of the extent of service integration for individual patients. Services supported by non-BPHC funding sources were therefore included, where they addressed the needs of similar target populations.

B. Definition of Terms

The terms *multi-risk patient* and *service integration* can have different meanings. For purposes of this project, we used the definitions provided below:

- A *multi-risk patient* is defined as "one who, due to medical condition or life circumstances, requires (and may be eligible for) services supported by at least two of the special population programs." Readers should note that this is an operational definition, centered on use of a particular categorical program, rather than a clinical definition. Indeed, we might have more accurately described the patients as "multi-risk/multi-program" -- but chose to use "multi-risk" largely for purposes of readability.

- *Service integration* is defined as "a method of providing patient care that has an identified locus of responsibility for assuring coordination across a spectrum of categorically-funded services to address patient medical, psychosocial and enabling service needs." Because the project centered on how agencies act to achieve service integration, we opted for a definition that centers on methods for assuring coordination in the design of organizational systems, and we looked for evidence of a "closed loop" -- referrals made, appropriate services rendered, and documentation of services delivered in patient records.

The following terms are used to describe entities examined in the project:

- *Agency* - This is the entity which received the categorical grants; an agency may operate multiple programs and have multiple sites.

- *Program(s)* - This term applies to categorical programs (e.g., HIV, Homeless, Pregnancy Outcome, Linkage, Public Housing) operated by the agency; these programs may be fully or partially funded by BPHC categorical grants.

- *Site(s)* - These are physical locations where the agency provides services; an individual site may be dedicated to a single program (e.g., HIV) or may have a combination (e.g., CPCP and Linkage).

C. Data Collection Methods

Collection of detailed information on organizational arrangements and provision of patient care services was the heart of this research effort. Prior to site visits, the project team reviewed written materials for each of the special population programs (e.g., reporting formats; grant application requirements) -- and the most recent grant application for each agency.

The site visits occurred between January-May, 1996. These two-day visits involved a three-person team, with both management and clinical experience. A consultant physician participated in every site visit. Interviews were conducted with key decision-makers (e.g., Executive Director, Medical Director, Director(s) of individual special population programs); administrative personnel (e.g., finance, intake-registration); and patient care staff (e.g., case managers, nurses, mid-levels, physicians).

The major interview-topics included organizational arrangements, strategic plating, management information systems, financial systems, coordination of clinical services across programs, organization of special population programs, coordination of care for individual patients, and agency definitions of integrated services. Detailed inquiry covered specific constraints or barriers imposed by BPHC reporting requirements or other legislative and regulatory requirements.

In addition to staff interviews and statistical data, project team members reviewed sample patient records and held informal discussions with patients.

- *Record Reviews.* We developed a specific protocol for patient record review that included appropriate information from both the medical chart and case management notes (see Appendix B). A physician familiar with CHCs conducted the review of approximately 50 patient records at 5 of the 6 agencies. Confidentiality and research review requirements in Maricopa County precluded reviews during that site visit. (See Chapter V for a more extensive discussion of the records review).

- *Patient Discussions.* Informal discussion groups, lasting about 45 minutes to one hour, were held at each visit. Each agency was asked to invite a mix of patients who used the special population programs and were willing to discuss their experiences with the program(s). Each group included approximately 10 individuals (mixed male/female); many of the women brought their young children with them. Some discussions were conducted in both Spanish and English.

D. Agency Selection Process

The project called for assessments at six multi-funded agencies receiving at least two of the four largest special population grant programs (e.g., Homeless, HIV, Substance Abuse, CPCP). Using grant lists for 1994 provided by BPHC (p. I-6), we identified 90 agencies receiving at least two or more special population grants. Exhibit I.1 shows the distribution of these agencies. Seventy-nine were CHCs; eleven were health departments and other community-based organizations. The preponderance of multi-funded agencies was in urban areas (74) while only 16 rural agencies received multiple grants. There was at least one agency in every Federal region receiving two grants besides CPCP. Funding for Health Care for the Homeless (57 agencies),

HIV-Early Intervention (63) and Comprehensive Perinatal Care Program (77) were by far the most prevalent.

Final selection was made from among 21 agencies -- nineteen CHCs, each with three BPHC special population grants, plus the two health departments with at least two grants. We sought to obtain a geographic mix of agencies that differed by size of caseload and mix of grants received. Participating agencies are listed below; Chapter II provides profiles of the study participants.

- Centro del Barrio, San Antonio, TX -- a CHC serving urban and rural populations with funding under both Health Care for the Homeless and Health Care for Homeless Children as well as CPCP and Ryan White III b.

- Clinica Sierra Vista, Lamont, CA -- a large multi-site agency serving urban, rural and geographically-isolated communities spread over two counties with CHC and Migrant Health Center funds and special population programs (CPCP, SIMRI, HIV and Health Care for the Homeless).

- Great Brook Valley Health Center, Worcester, MA -- a CHC operating in a mid-size urban area with Public Housing Primary Care and CPCP funds.

- Maricopa County Department of Public Health and Maricopa County Health System, Phoenix, AZ -- a county government with multiple special population grants (HIV, Linkage and Health Care for the Homeless) and no CHC funding serving two counties spanning urban and rural environments.

- Multnomah County Health Department, Portland, OR -- a county-wide health department with CHC and special population funding (CPCP, HIV, Linkage, Health Care for the Homeless and Homeless Children).

- William F. Ryan, New York City, NY -- a CHC in a large complex urban environment with funding under three major programs (CPCP/Homeless/HIV).

Exhibit I.1 Characteristics of Multi-Funded BPHC Agencies

	Agencies Receiving 2 or more • Grants	CHCs with 2 Grants excl. CPCP	CHCs with 2 Grants incl. CPCP	Non-CHCs with 2 Grants
Total	90	21	58	11
Geographic Distribution				
Urban	74	20	43	11
Rural	16	1	15	0
Federal				
1	10	3	7	0
2	17	2	12	3
3	10	1	8	1
4	8	2	5	1
5	11	3	6	2
6	8	1	7	0
7	5	1	4	0
8	5	1	3	1
9	9	4	2	3
10	7	3	4	0
Special Population Grant Distribution				
SA	*4*	*3*	*0*	1
CPCP	77	19	58	0
SIMRI	7	1	6	0
HCH/C	3	3	0	0
HCH	57	19	27	11
HIV	63	21	31	11
PHPC	*4*	1	*3*	*0*
HS	*4*	*2*	*2*	*0*

Source: BPHC, Division of Programs for Special Populations
Note: SA: Linkage - Primary Care/Substance Abuse Treatment; CPCP: Comprehensive Perinatal Care Program; SIMRI: Infant Mortality; HCH/C: Health Care for Homeless Children; HCH: Health Care for the Homeless; HIV: HIV-Early Intervention Services; PHPC; Public Housing Primary Care; HS: Healthy Schools; CHC: Community Health Centers

II. DESCRIPTION OF THE STUDY AGENCIES

A. Overview

Agencies participating in this project were located throughout the country, from New York to California. Although each had a unique service configuration, tailored to its commumty (See Exhibit II. 1), they exhibited some common patterns:

- Five of the six provided general primary care services, under a CHC grant (Section 330), and had CPCP funding. The sixth (Maricopa County) had distinct special population programs, and no CHC funding.

- All but one received *direct* BPHC grants for Health Care for the Homeless and HIV-Early Intervention services. Great Brook Valley received HIV funding as a sub-contractor to another BPHC funded agency; they also provided services for the homeless under a small subcontract from another agency.

- One agency received SIMRI support, and another one received a Public Housing Primary Care grant. Two received support from Health Care for Homeless Children (340s). Two had Linkage - Primary Care/Substance Abuse Treatment grants, and one was a former Linkage agency.

Services to special populations are supported by BPHC grants and a variety of other federal and state grants and third-party payments. Exhibit II. 1 provides an overview of the role of BPHC grants and Medicaid funding for total services. Because of differences among agency data systems, uniform information on the full level of resources devoted to care for particular special populations proved unavailable or would have required expensive, special computer runs. In particular, many did not disaggregate Medicaid revenue for services to special populations, a major financial resource for services to pregnant women. None of the CHCs could easily provide information on Section 330 dollars used for services to these populations.

The composition of special population programs users varies among the study agencies. (Exhibit II.2). All have large, and reportedly growing, high-risk populations seeking care. The homeless constituted the highest proportion of special population users at three agencies (Centro del Barrio, Maricopa County and Multnomah County). HIV-positive and homeless caseloads were relatively equal at William F. Ryan. Clinica Sierra Vista had a high number of perinatal care patients as well as a large homeless population. Readers should note that reported data tend to reflect the number of clients *using the* special population programs. Since agencies serve other clients with these characteristics who are not enrolled in a targeted program, the data usually undercount patients with these characteristics.

Exhibit II.1 Grants, Geographic Area and Sites in 1995						
Agencies'	*CDB*	*CSV*	*GBV*	*Maricopa*	*MCHD*	*Ryan*
BPHC Grants Received Directly	330 CPCP 340/340s HIV	330 329 CPCP 340 HIV, SIMRI	330 CPCP Public Housing	340 HIV Linkage	330 CPCP 340/340s HIV Linkage	330 CPCP 340 HIV
Area Served	urban, rural	urban, semi rural, rural	urban, suburban	urban, rural	urban, suburban	urban
Service Sites (general population and special population)	2 general PC sites, 1 HIV, and5 outreach clinics in shelters	8 general PC sites, 1 HCH, and 1 HIV	1 general PC/HIV site with outreach	1 HIV clinic, 1 HCH clinic	5 general PC sites, 1 HIV and 2 homeless sites	1 general PC/HIV site with 5 outreach homeless clinics and mobile van
Total Agency Budget ($ in millions)	$5.6	$16.5	$6.8	NA[2] ($1 for HIV) ($1.8 for HCH) ($.57 for Linkage)	$81	$16.7
% of Total Budget from BPHC grants[3] (%)	43%	20%	15%	NA (50% of HIV) (67% of HCH) (100% of Linkage)	7%	23%
% of Total Budget from Medicaid	20%	26%	26%	NA (8.5% of HIV) (7% of HCH) (0% of Liige)	48%	50%

[1]CDB=Centro del Barrio; CSV=Clinica Sierra Vista; GBV=Great Brook Valley; MCHD=Multnomah County Health Department.

[2]Total funds are not available across the two agencies.

[3]BPHC grants include CHC funds as well as the special population funds.

Exhibit II.2 Agency Users - Total and Special Population, 1995						
Agencies	***CDB***	***CSV***	*GBV*	Maricopa	MCHD	***Ryan***
Total Users	**36,425**	**43,938**	8,858	**NA**	**57,704**	**23,882**
Special Population Program Users	**9,412**	**5,123**	709	11,181	4,565	2,633
(Homeless)	**(8,296)**	**(1,216)**	**(50)[3]**	(9,849)	(3,581)	(1,180)
(HIV)	**(324)**	**(387)**	**(430)[3]**	(1,084)	**(604)**	(1,046)
(Pregnant)	**(792)**	**(3,520)**	(229)		(176)	**(407)[2]**
(Linkage)			**978[4]**	(248)	(204)	
Public Housing			**4,382[4]**			

Notes:

1. The Special Population Program User line is the sum of the Homeless, HIV, Pregnant and Linkage lines; they generally represent the numbers enrolled in those programs, but are not unduplicated in all cases.
2. 1994 data, no CPCP program in 1995.
3. Receive BPHC funds under subcontract from another agency.
4. GBVHC serves 978 substance abusers; it no longer receives the Linkage grant so these numbers are not reflected in the special population program total. Public housing users cannot be unduplicated from the other special population categories and are not included in the special population total.

B. Profiles of the Agencies

Community geographic and demographic characteristics, as well as agency history and programs, influence the approaches used by the agencies to integrate services for designated special populations. This section presents brief profiles of the six study agencies; more extensive profiles appear in Appendix A.

1. Centro del Barrio (CDB) -- San Antonio, TX

Located in San Antonio and serving the residents of the city and Bexar County, Centro del Barrio provides primary care, specialty services, and extensive referral services. The hub of the system is the South Park Medical Care Center (SPMCC). Separate free-standing clinics serve distinct populations (rural residents, homeless shelter residents, HIV positive clients, the elderly, and school-aged children).

CDB provides services to over 35,000 persons. The overall client base includes a high percentage of Hispanic female users whose primary language is Spanish. The service area includes large numbers of under-employed and uninsured persons -- and unemployment is a growing threat as the local Air Force base, employing 50% of the area middle income families, is slated for closure.

South Park Medical Care Center (SPMCC) is the central primary care location, providing the full complement of primary care medical and dental services to over 250 patients a day. While the special population programs (i.e., HIV and Homeless) operate at separate locations, patients at those sites receive specialty services and dental care at SPMCC. A sizable proportion of clinical staff (including mid-levels) rotate among the programs and sites at least one day a week.

Started as a mental health program in 1978, CDB retains a strong mental health and social work orientation and operates extensive counseling services at the Family Resource Center. Treatment protocols for all patients are guided by a "holistic" approach that integrates psychosocial development with medical care. For example, CDB has several child development specialists, who work particularly with homeless children.

Primary care and case management services for an estimated 8,300 homeless are available through five shelter-based clinics. One HCH clinic is located at the Battered Women's Shelter, and specializes in services to abused women and their children. Overall, the health care for the homeless program provides primary care (including prescription drugs) through CDB clinics, specialty services at SPMCC and referral services through other providers (e.g., University of Texas). Because of extremely high need, the dental program located at SPMCC has allocated 2 sessions a week for homeless children.

Since October, 1995, HIV- Early Intervention Services have been provided at the Laurel Heights clinic -- a primary care site with an HIV specialty. Since re-locating to this more

"centralized" site, enrollment in the program has nearly doubled to more than 300, and 54 new female patients are enrolled (where there were none before). Previously, the program was co-located at a hospice serving primarily end-stage AIDS patients. Although specializing in HIV care, the Laurel Heights site has scheduled general primary care sessions to provide services for others in the surrounding community.

The CPCP program, serving nearly 800 women, operates from the South Park Medical Care Center, and collaborates with the University of Texas hospital and with private hospitals to provide deliveries. The program has a full-time OB-Intake Nurse, who provides extensive case management and follow-up services. Uninsured women (14 % of births) are delivered by residents at the university hospital; all other patients are delivered by CDB staff.

Centro del Barrio -- Special Population Grants and Other Funding

Centro del Barrio receives the following grants directly from the BPHC:

- Community Health Centers (330)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Health Care for Homeless - Children (340s)
- Ryan White Title IIIb (HIV)

In, 1995, BHPC grants combined to make up almost 43 % of the total revenues of $5.6 million for Centro del Barrio. The Section 340 grant provided nearly 56% of the total Health Care for the Homeless program revenues, while 93 % of the revenues for the HIV program came from the Ryan White Title IIIb grant. Medicaid payments accounted for 20% of total agency revenues.

2. Clinica Sierra Vista (CSV) -- Lamont, CA

Driving down Weed Patch Highway through central California farmland, you arrive at Clinica Sierra Vista, a primary care clinic and administrative headquarters of a system of 10 community-based health clinic sites. These clinics serve two counties covering an area as large as the state of Massachusetts. The ten clinics are placed in a variety of urban, semi-rural and isolated rural communities and served about 44,000 users in 1995. About 40% of the users receive services at the semi-rural Lamont headquarters; 30% access services through four sites in downtown Bakersfield; and the remaining 30% find care through the five sites set in rural agricultural and mountain communities. Two of the clinics have a distinct focus, one on health care for the homeless and the other on HIV treatment. The ethnic mix varies from site to site; for example, the clinic in Lamont and the East Bakersfield Community Health Center serve populations that are 70-80% Latino descent while the homeless and HIV service sites are over 50% white.

The complexity of the Clinica Sierra Vista system stems not only from the large number of sites but also from the numerous other programs it has brought under its umbrella over the years. Several of the primary care clinics and the HIV program were started by other entities. CSV operates Kern Lifeline (HIV social case management) services for the county HIV consortia. In addition to the 10 health clinics, CSV administers 14 WIC centers (8 collocated with health centers); an Adolescent Family Life Program/Cal-Learn (a stay in school/job training/birth outcome improvement program for pregnant and parenting teens) at 6 sites (1 collocated at CSV); 3 school based clinics; and 6 Neighborhood Partnerships (integrated services for children and families across a spectrum of health and social services).

Each of the 10 clinics offers primary care; seven offer the CSV Maternal and Child Outreach Program (funded by CPCP and other dollars); one clinic specializes in health care for the homeless, and one focuses on the needs of HIV-positive patients. While CSV has specialized service sites for persons who are homeless or HIV-positive, individuals with these conditions are also seen at other non-categorical clinics.

Pregnant women are the largest single group of "special population patients. " The Maternal and Child Outreach Program offers extensive perinatal care, including intensive health education, home visits, and case management to approximately 3,500 clients. The SIMRI program, serving about 145 women, targets high risk African-American populations with expanded services such as transportation assistance and referrals to community social services through a Neighborhood Partnership.

The homeless program, serving approximately 1,200 homeless people, recently moved out of the local homeless shelter into a free-standing site in urban Bakersfield. This new site, located in an area where homeless persons are known to congregate, provides primary care and case management to a homeless population with a relatively high proportion of males recently released from prison.

The HIV program, also in downtown Bakersfield, provides services to 387 HIV-positive patients and their families from a free-standing location, known as the 34th Street Clinic. This location serves as the system's main referral resource for specialized infectious disease medical services, case management, mental health services, and social supports. Additionally, the infectious disease specialist rotates through the other CSV primary care and homeless clinics and provides consultation to private practitioners and the county hospital.

Clinica Sierra Vista -- Special Population Grants and Other Funding

Clinica Sierra Vista receives a number of BPHC grants:

- Community Health Centers (330)
- Migrant Health Center (329)
- Comprehensive Perinatal Care Program (CPCP)

- Health Care for the Homeless (340)
- Ryan White Title IIIb (HIV)
- Special Infant Mortality Reduction Initiative (SIMRI)

BPHC dollars accounted for nearly 20 % of the $16.5 million total agency revenues in 1995. The Health Care for the Homeless program received 71% of its funding from the Section 340 grant; while Title IIIb funds accounted for nearly half of the total HIV program revenue. Clinica Sierra Vista also received Ryan White Title II funds to support Kern Lifeline; CPCP and SIMRI funding support enhanced perinatal care services. Support from other federal grants was $2.2 million; state, local and private grants contributed another $3.1 million. Medicaid revenues accounted for 26% of total agency revenues, with private insurance and patient fees contributing another 8% and 6% respectively.

3. **Great Brook Valley Health Center (GBVHC) -- Worcester, MA**

Set across the street from blocks of low rise, brick public housing apartment buildings, GBVHC serves an extremely poor, primarily Latino community. GBVHC provides "one-stop" health care, encompassing medical, dental, mental health, innovative acupuncture detox for alcoholism and drugs, pharmacy and laboratory services. Originally located in apartments of the public housing complex, GBVHC recently financed and moved to a newly constructed free-standing primary care center, where they served nearly 9,000 users in 1995. Some outreach and community-oriented services (e.g., health education) continue operating within housing development offices.

The client population of GBVHC has doubled in the past five years. Public housing residents now make up 30% of users; another 31% come from downtown Worcester, and more than 20% comes from outside the Worcester area altogether. The center serves a population that is 30-40 % monolingual Latinos. The patient population often accesses care on an acute basis; about 40% are episodic care seekers. Less than 18 % of clients have their own cars, and less than 30 % have telephones. Thus, the "one stop shop" approach helps maximize the effectiveness of visits, whether urgent or planned.

GBVHC is a single site program with extensive community outreach and established liaison with other agencies (drug abuse treatment and corrections). There are no separate special population programs; GBVHC treats HIV as a primary care disease, and the public housing grant supports specific services rather than categorically classified individuals. Public housing funding supports specific medical, dental, mental health, external program and support services received by approximately 4,000 clients. The center serves approximately 50 homeless and 430 HIV positive patients, supported through subcontracts from other BPHC agencies and the State, but not direct BPHC categorical funding. There were about 230 pregnant women in their CPCP program in 1995.

Great Brook Valley formerly received a Linkage - Primary Care/Substance Abuse Treatment grant. Elements of the model survive; for example, GBVHC staff provide primary care once a week at Spectrum, Inc., a methadone treatment site. Fifty percent of the substance abuse treatment clients at Spectrum did not previously have a regular primary care provider. Additionally, the state of Massachusetts has replicated the linkage model of case management and education developed by GBVHC for correctional institutions. GBVHC has a large population of approximately 1000 substance abusing clients.

Patients enter directly into care at GBVHC through the medical door, or through dental, external program, or mental health doors. The program is organized along family-oriented lines: all members of a family may be seen by one Family Practice physician/team, and patient's medical charts are cross-referenced and filed by family. GBVHC is implementing a system of "office visit planning" to ensure delivery of preventive health care service as well as urgent care.

Great Brook Valley Health Center -- Special Population Grants and Other Funding

The GBVHC receives the following direct support from BPHC:

- Community Health Centers (330)
- Public Housing Primary Care (PHPC)
- Comprehensive Perinatal Care Program (CPCP)

BPHC grants accounted for 15 % of the total agency revenues of $6.8 million in 1995. The Section 340(a) grant provided 100% of the financial support for their public housing activities. GBVHC also receives other BPHC funds via a sub-contracting arrangement with another agency. The HIV program had total revenue of $666,352, 21% of which is Ryan White Title IIIb funds received through sub-contract. They received a small amount ($6,607) through a sub-contract with the HCH agency in the area. GBVHC receives another $64,752 from other federal grants, while state, local and private grants provided another $1.6 million of support. Medicaid revenues accounted for 26% of total revenues.

GBVHC has sought to align itself with a variety of managed care plans since it entered into the market in 1986. GBVHC is a participant in Medicaid managed care, through contracts with Neighborhood Health Plan (NHP) and the Primary Care Clinician Program; in 1994, about one-quarter of all users (2,300) were in managed care. With increasing competition for Medicaid managed care patients, GBVHC has lost ground since 1992. It has been left with a disproportionately large number of monolingual clients as other plans have aggressively sought managed care clients.

4. Maricopa County Department of Public Health and Maricopa County Health System -- Phoenix, AZ

Maricopa County has a growing, more transient population spread out over an area with significant pockets of poverty and low per capita incomes. The service area for the special populations programs encompasses both Maricopa and Pinal Counties, covering a 14,000 square mile area. The Maricopa County Department of Public Health and the Maricopa Health System are two separate agencies that provide primary care and offer specialty and referral services to the homeless, substance abusing and HIV-positive populations. Since each of the categorical programs are operated independently, the extent of overlap among clients is not known. The county is not a Section 330 agency nor does it receive a perinatal program grant.

The Maricopa County Health System, encompasses the Maricopa Medical Center (county public hospital), the Maricopa Health Plan (county HMO) and 15 primary care clinics including the McDowell Healthcare Center. McDowell provides primary care to over 1000 persons who are HIV positive and those with AIDS. These clients are primarily male (93 %) and white (86%). McDowell providers also collaborate with various local agencies and specialized providers to offer, coordinate and facilitate access to a continuum of services, including clinical trials (Phoenix Body Positive and the Maricopa Medical Center) and behavioral services and case management (principally through HIV Care Directions of Phoenix). Housing is provided for persons with AIDS via HOPWA (Housing of Persons with AIDS) funds.

The Maricopa County Department of Public Health administers the Health Care for the Homeless and the Linkage Programs. Homeless persons receive primary care, case management and referral services through the single HCH Clinic, located next door to a large shelter in Phoenix. The program served nearly 10,000 clients; 57% are white, 25 % Hispanic, 12% Black and 5 % Native American. The HCH Clinic provides primary care and referrals, serving homeless shelter residents and "street folk" (e.g., residing near the river or at rural desert encampments). The HCH Outreach Program relies on case managers who work within the community, providing "street" services, linking the homeless to the HCH clinic and other local agencies.

The Linkage Program focuses on serving 248 substance abusers and their families, providing services directly (e.g., case management) and coordinating referrals for specific services via a network of Linkage partners and local agencies. Linkage case managers work with HCH and McDowell clients, focusing on behavioral services, substance abuse treatment, and mental health counseling. Case managers connect clients to a variety of rehabilitation, detox, and primary care facilities, including the Local Alcohol Reception Center (LARC), 7th Avenue Primary Care Center, and Southwest Behavioral.

Maricopa County -- Special Population Grants and Other Funding

Maricopa County receives the following BPHC grants:

- Health Care for the Homeless (340)
- Ryan White Title IIIb (HIV)
- Linkage - Primary Care/Substance Abuse Treatment

The Department of Public Health received both a Section 340 ($1.8 million) and a Linkage - Primary Care/Substance Abuse Treatment grant ($567,283) in 1995. Both programs relied heavily on BPHC grants. The Section 340 grant accounted for 67% of the total revenues for the Health Care for the Homeless program, while the Linkage program relied exclusively on the BPHC grant for financial support. The Health Care for the Homeless Program was also supported by $50,000 in state and local grants. Arizona has the first statewide mandatory Medicaid managed care program - the Arizona Health Care Cost Containment System (AHCCCS). Medicaid-supported long term care is also provided through a managed care system - Arizona Long Term Care System (ALTCS).

Maricopa County Health System's **HIV** program operated from the McDowell Healthcare Center is the direct recipient of Ryan White Title IIIb funds in the amount of $1.02 million. These grant funds accounted for nearly 50% of the total program revenue in the fiscal year ending June 30, 1996. Activities at McDowell were also supported by Ryan White Title I; $80,935 in state grants; and $85,000 in capitated payments from AHCCCS and ALTCS.

In light of this history, Maricopa County aggressively selects to enroll special populations, with on-site AHCCS/ALTCS eligibility determination and assistance at both the HCH and McDowell Clinics. Nevertheless, AHCCS/ALTCS revenue account less than 10 percent of total revenue for both programs. The BPHC grants cover populations who are uninsured and/or otherwise ineligible for AHCCCS or ALTCS. The McDowell Healthcare Center is taking the lead in developing and implementing a managed care plan targeted to people living with HIV. The HCH program must coordinate with nine AHCCCS contracting health plans to which the homeless may be assigned.

5. Multnomah County Health Department (MCHD) -- Portland, OR

The Multnomah County Health Department provides health care for underserved and low-income residents of the city of Portland and the surrounding county. The county **no longer has** a public hospital. Services often provided by a public hospital outpatient department are delivered through a system of 8 primary care sites. Speciality service clinics, school based clinics and referrals to an array of state and local entities are also provided. In addition to participating in these activities, MCHD engages in traditional public health surveillance (TB, STD) and immunization activities.

The eight primary care clinics registered almost 58,000 users. While 14% of the county population is from a minority group, 39% of MCHD users are minorities, with over 25 % of visits by mono-lingual, non-English speaking clients. Ninety-eight percent of clients have incomes below 200% of poverty in a county where 32 percent of the population falls under this income level. The BPHC funded special population program users account for approximately 8 % of total users.

The health care for the homeless population is the largest of the BPHC funded programs with almost 3,600 clients. The Burnside Health Center, funded by Section 340 dollars, provides services to approximately 2,900 homeless people. La Clinica de Buena Salud, funded by 340s monies, is located at a Portland subsidized housing complex with a large Hispanic immigrant population. This program provides accessible health care and related services to potentially homeless Hispanic immigrant children and their immediate families. The program, which operates only two days a week, serves nearly 700 users.

HIV related services operate from a downtown Portland location that also houses a primary care center and the Health Department's administrative offices. The program serves about 600 patients. The HIV Treatment Clinic provides primary care, specialty services and case management to HIV-positive individuals. Prior to Ryan White funding, MCHD started a program for HIV-positive clients within another primary care setting. Space limitations, and the preference of HIV clients to have a separate clinic, prompted a move to a separate floor of the high rise building.

The Linkage - Primary Care/Substance Treatment program provides case management, referrals and primary care services to 204 substance abusing individuals. The program is now located within the Northeast Health Center and seeks to reach substance abusers at an earlier stage. Previously, the program had out-stationed primary care providers at substance abuse treatment sites, but staff found they were under-utilized.

The CPCP program (Assertive Drug Alcohol Pregnancy Transition -- ADAPT) is run in conjunction with the Department of Corrections and serves 176 women. Field community health nurses make initial contacts with pregnant clients in a correctional setting, and provide prenatal health education, substance abuse assessment and engagement in substance abuse treatment. Upon release, follow-up care and coordination of services continues for up to 18 months.

Multnomah County Health Department -- Special Population Grants and Other Funding

The Multnomah County Health Department receives the following grants from the BPHC:

- Community Health Centers (330)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Health Care for the Homeless - Children (340s)

- Ryan White Title IIIb (HIV)
- Linkage - Primary Care/Substance Abuse Treatment

BPHC grants accounted for nearly 7% of the total health department revenues ($5.5 million out of $8 1 million) for the fiscal year ending June 30, 1995. The Health Care for the Homeless grants (340 and 340s) provided over half the support for the homeless programs. Over one-third of the support for the HIV program was provided by the Ryan White Title IIIb grant. The HIV program also received funding through Ryan White Title II, and the Centers for Disease Control and Prevention. The BPHC grant provided 56% of the total revenue for the ADAPT (perinatal) program, and the Linkage-Primary Care/Substance Abuse Program received over 75 % of its total revenue from the federal grant.

Multnomah County Health Department received other federal grants in the amount of $5.9 million. State, local and private grants provided a combined $26.1 million of support -- $23 million of which is derived from the County General Fund. Medicaid payments (through CareOregon) totalled $39,156,258 -- almost half of the total agency revenues.

The health department has been in a managed care arrangement with the state since Oregon received a Medicaid waiver in 1988. In 1994, MCHD joined with Oregon Health Sciences University and the Oregon Primary Care Association to create a statewide health care plan (CareOregon) and HMO. About one-half of Care Oregon's 22,000 enrollees are served by the Multnomah County Health Department.

6. **William F. Ryan Community Health Center -- New York, NY**

Located in New York City, the Ryan Center care delivery system consists of one comprehensive primary care clinic, five smaller clinics in homeless shelters, three school based clinics, and several community outreach programs, including a well-equipped mobile clinic. The primary care clinics and outreach programs operate in upper Manhattan and provide services to nearly 24,000 users. The service area has a population that is poor, culturally diverse and at high risk of homelessness and HIV infection. Forty percent of the service area residents are Hispanic, and one-third are non-Hispanic blacks.

The main primary care site of the Ryan system is located on 97th Street on the Upper West Side of Manhatten. Due to space limitations, case management for HIV and mental health services are provided at the close-by 100th Street site. As noted above, Ryan operates primary care clinics in five city homeless shelters, three area schools, and also provides services through an array of mobile outreach programs. Ryan also monitors 400 WIC vendors in Manhattan.

Primary care services for approximately 1,000 HIV-positive patients are integrated with all other primary care services at the 97th Street facility. William F. Ryan also operates a series of outreach programs -- the largest being the SHOUT Van (Street Health Outreach for Urban Teens) funded by Ryan White Title I. This mobile clinic has become a fixture in many New York

City communities, bringing HIV testing and counseling, primary care services and educational materials (supported by Ryan White Title I and Section 340 dollars) to persons not accustomed to using a community health center. The Air Bridge Network coordinates continuous case management and clinical care for HIV positive persons migrating between New York City and Puerto Rico.

About 1,200 homeless individuals receive care through the Homeless program, either at one of the five shelter-based clinics, or through the 97th Street site. Outreach services to the homeless include the Assertive Community Treatment Program (ACT). ACT is a mobile intensive treatment program for the severely mentally ill and the chemically abusing homeless population. The SHOUT Van also provides services to the homeless of upper Manhattan.

The CPCP program operates in collaboration with St. Luke's/Roosevelt Hospital to provide perinatal and post partum care for mothers and infants. Deliveries are performed at the hospital by Ryan physicians, while perinatal, and primary care services are provided at the 97th Street site. This program was recently resumed after a one-year hiatus, following the hospital's decision to return control of deliveries to Ryan physicians rather than having residents deliver patients. Once fully operational, Ryan expects to serve 600 women and infants.

William F. Ryan Community Health Center -- Special Population Grants and Other Funding

The Ryan Community Health Center receives the following grants from BPHC:

- Community Health Centers (330)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Ryan White Title IIIb (HIV)

BPHC dollars accounted for nearly 23% of 1995 total agency revenues of $16.7 million. The Health Care for the Homeless program received one-third of its total funding from the Section 340 grant, while 37% of the funding for HIV services are funded by the Title IIIb grant. The HIV program also received support from Ryan White Titles I and II, and the Centers for Disease Control and Prevention. Other direct federal grants amounted to $228,283. While state, local and private grants (e.g., New York State Department of Health, New York City Department of Health, and the Robert Wood Johnson Foundation) combined for another $3.2 million in support, Medicaid contributes almost half of the total agency revenues, while Medicare contributed another 4%.

In 1988, Ryan staff spurred development of CenterCare, an independent HMO which is the only Medicaid managed care plan with which Ryan contracts. The center serves about 7,600 managed care enrollees. Ryan also helped to establish the Ryan Community Health Network, Inc., a not-for-profit, community-based health care system consisting of CenterCare, the Ryan center, another community-based center and St. Luke's/Roosevelt Hospital.

III. THE DELIVERY SYSTEM PERSPECTIVE ON SERVICE INTEGRATION

Three prototypical organizational arrangements emerged from this study: (1) unitary; (2) hub-and-spoke; and (3) linear. Agencies often combine elements from these prototypes to create unique delivery systems appropriate to their environments and patient needs. Specific homeless and HIV programs exhibit different organizational characteristics, reflecting, in part, the diversity and desires of patients. From the perspective of service integration, each of the prototypes offered different strengths and weaknesses.

This chapter explores the delivery system perspective--characterizing the formal organizational arrangements among programs, services and sites funded by special population grants. First, we present three prototypical approaches for organizing services and then discuss how these three prototypes differ in practice and across study agencies. Finally, we highlight issues important in organizing services to address needs of special populations.

A. Three Organizational Prototypes

Agencies with multiple special population grants face complex organizational challenges. New programs have to be integrated into a pre-existing organizational structure. Agencies must often meet special service delivery or reporting requirements applied to each discrete grant received. Formal organizational charts depicting departmental structures and lines of authority provide some clues to how agencies organize their delivery systems, but do not fully illustrate the relationships among programs and funding sources.

Drawing on the experience of these six agencies, three approaches for organizing programs supported with special population grants were identified. These prototypes reflect fundamental differences in relating special population programs to each other -- and their individual relations with general primary care services rendered by the agencies (e.g., under a CHC grant or through a health department).

The prototypes primarily reflect differences in organizing HCH, HIV, and Linkage programs. [1] Care for pregnant women (CPCP and SIMRI) showed little variation. Four of the five agencies with CPCP funding operated their perinatal programs in conjunction with general primary care services. Multnomah County Health Department, the exception to rule, targets CPCP funds to high-risk pregnant women who are currently or formerly incarcerated.

'Only one agency had a Public Housing grant.

1. *The Unitary Approach*

The unitary approach might also be described as a "one-stop shopping" model of providing care for a geographically defined population, Under this prototype, all patients, regardless of service needs or risk status, receive service at the same physical location. The approach, illustrated in Exhibit III. 1, is characterized by three factors:

- ***A single medical care site,*** that serves both the "general" low-income population and targeted, special, multi-risk patients.

- ***Common clinical personnel,*** where the same medical staff (e.g., physicians, mid-levels, nurses) provide care for both the general primary care population and special populations.

- ***Outreach personnel,*** who focus on specific populations (e.g., homeless, at risk of HIV), and identify, enroll and follow up with multi-risk patients who are being served in the single site.

Although not observed in this study, it is theoretically possible for multi-site agencies to adopt a unitary approach, and provide special population services within each of the primary care clinics. Economy of scale considerations may limit the pragmatic potential for organizing multiple "unitary" sites.

2. *Hub-and-Spoke Approach*

The ***hub-and-spoke*** prototype is, as the name suggests, organized like a wheel -- with special population programs tied to a core support center. The three common attributes (see Exhibit 111.2) are:

- A ***comprehensive "hub " or core primary care clinic,*** with medical care and social services, serving as a referral center and back-up for all clinic sites.

- ***Separate clinic sites*** for special population programs (e.g., the spokes of the wheel). Staffing for the sites includes a combination of designated personnel, working full-time for the special population program, and rotating medical personnel from the core primary care clinic. For example, some agencies established separate clinics because they were physically closer to the target population, and a sufficient critical mass of high risk patients justified a full set of specially targeted services.

- ***Cross-clinic coordination and linkage*** through management information systems (e.g., patient registration and/or medical data) that maintain ongoing communication among the spoke sites and within the "hub."

3. Linear Approach

The third prototype is a horizontal organizational structure (see Exhibit III.3) exhibiting:

- ***Multiple primary "medical" care sites, each serving*** different geographically-defined areas. While one site may have somewhat more resources and/or specialist services than the others, none has the same dominant role as the core primary care site in the "hub-and-spoke" approach.

- ***Separate sites*** for one or more special population programs. A separate special population program might have one or several clinic sites. These separate programs tend to have designated staff, although some physicians may rotate among the sites.

- ***Linkage of patient services*** through case management and established inter-site referral systems. The linear approach tends to rely heavily on case management staff and interpersonal communications to integrate services for individual patients, while management information systems play a more limited role. In fact, if management information systems were more evident in their ability to link sites, the organization might move closer to the hub-and-spoke prototype.

B. Translating Prototypes Into Practice

Prototypes clarify the organizational options available to agencies, and each exhibits different strengths and weaknesses. Two key characteristics distinguish the three prototypes:

- The number of sites increases as one moves from unitary to hub-and-spoke or linear models.

- The methods of communication differ between linear and hub-and-spoke models. Linear systems depend on interpersonal relationships and case management for integrating individual care. Hub-and-spoke systems rely on a core clinical center and a management information system for sharing patient registration information and clinical data.

Exhibit III.1 Unitary Prototype

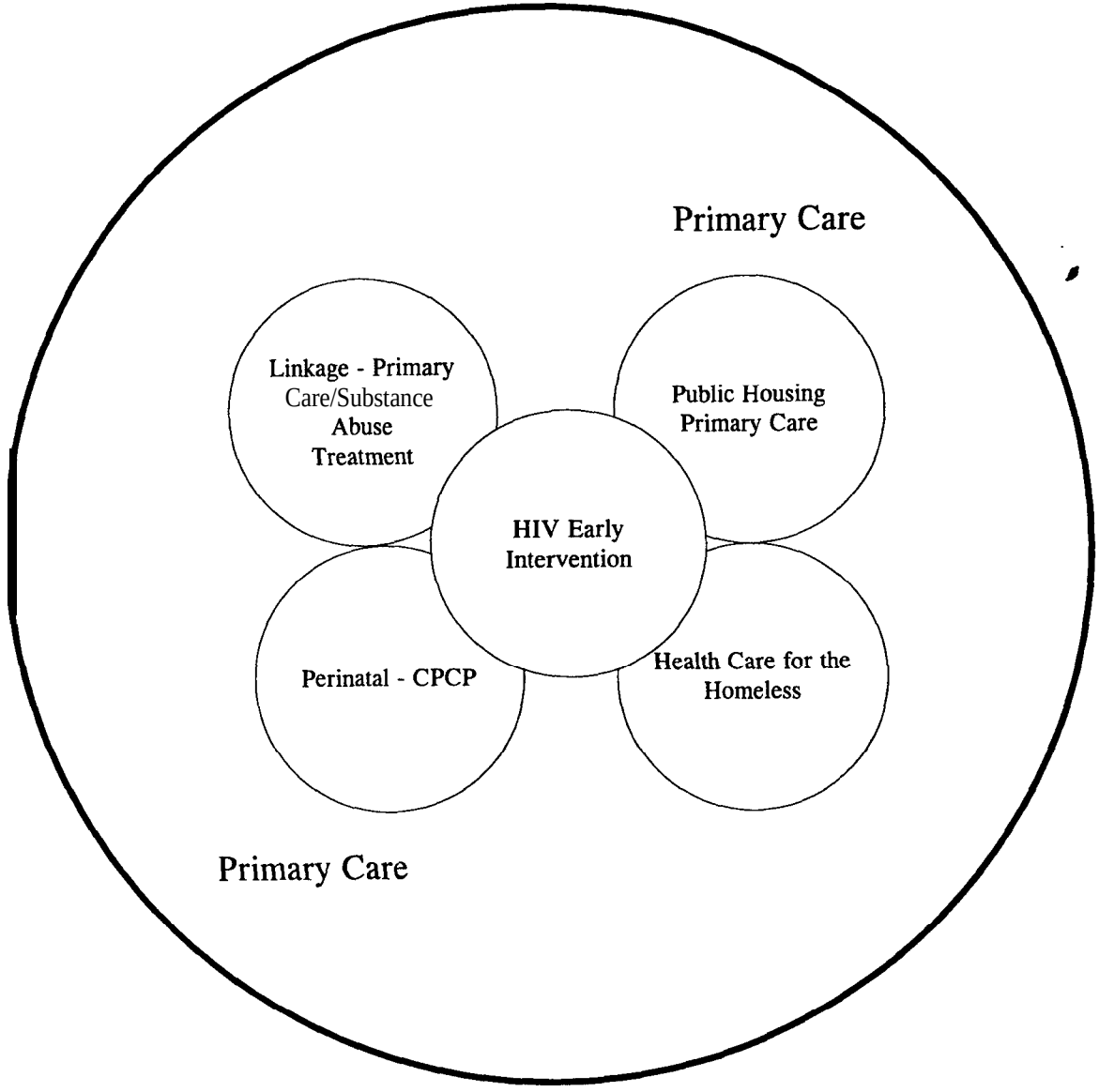
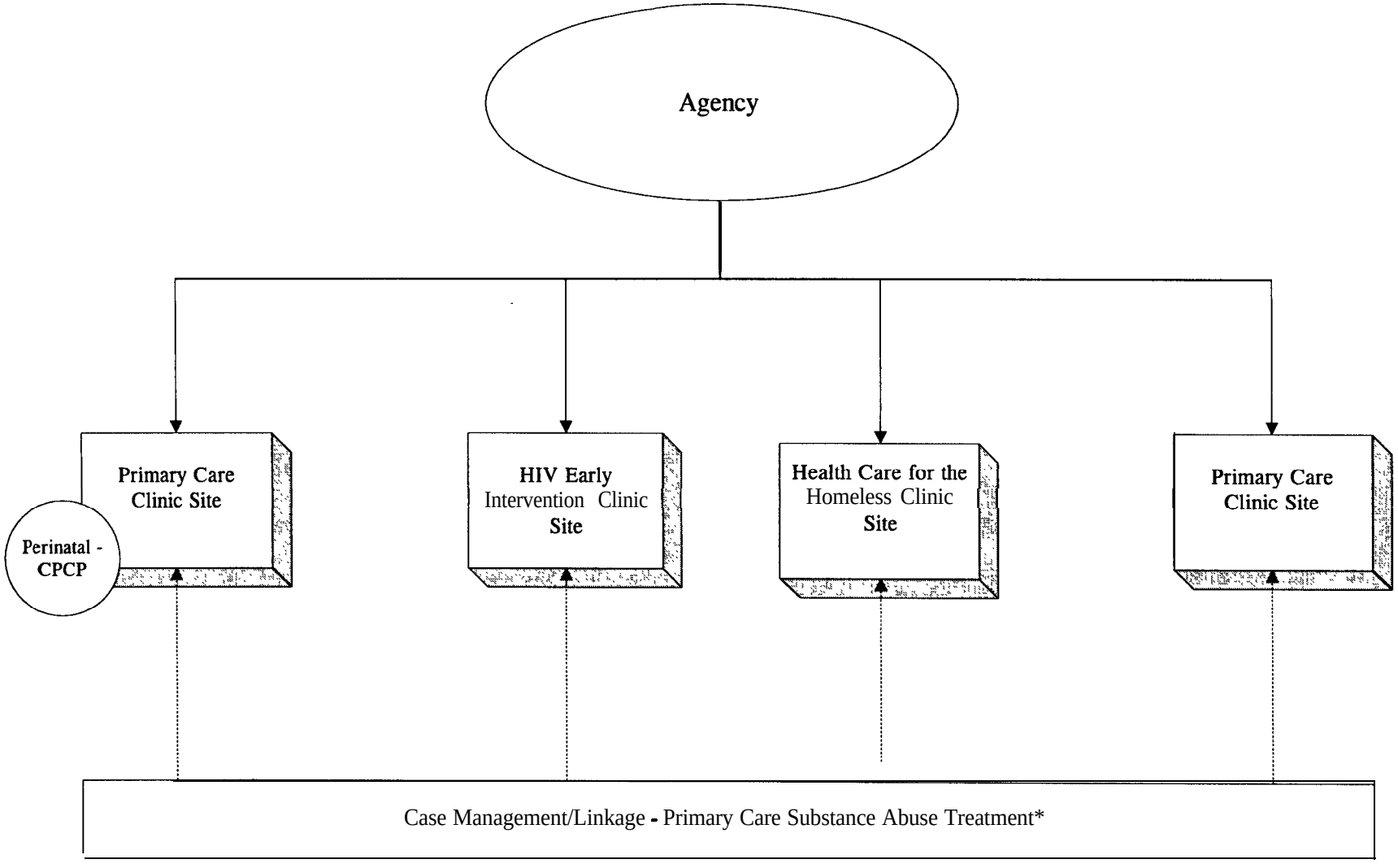


Exhibit III.3 Linear Prototype



* The linear model agency with a Linkage grant in this study did not have a distinct site for the Linkage program, but case managed clients served at various primary care and substance abuse treatment sites.

In practice the six agencies mixed the prototypical approaches to arrive at organizational arrangements best suited to their philosophy and history, their community and mix of special populations, and the combination of available resources. (Exhibit III.4)

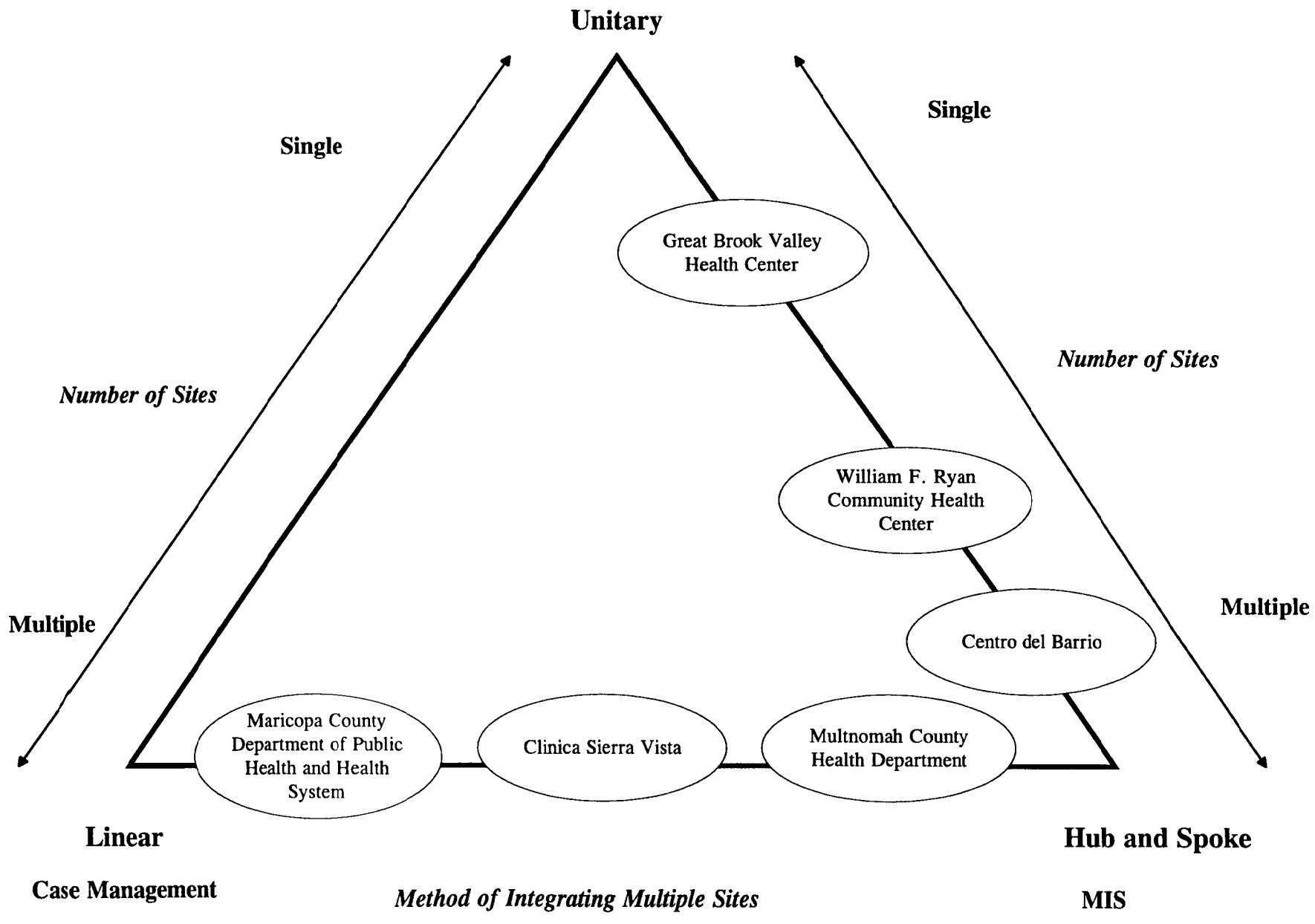
- Great Brook Valley -- an agency with one "general" primary care site and a historic tie to a geographically-defined area (a mid-sized urban community and a public housing project) -- is closest to the ***unitary*** approach. Conversely, Maricopa is closest to the pure linear approach as it has discrete HIV and HCH sites, and no management information system links between the sites for registration or sharing medical information. The agency is dependent on formal and informal case management for care coordination if an individual patient uses both sites.

- William F. Ryan combines elements of the ***unitary*** and ***hub-and-spoke*** prototypes. Providing HIV services in conjunction with general primary care is a ***unitary*** approach while operating homeless clinical services at several shelters is the ***hub-and-spoke*** approach. Ryan has a unified patient record system, with unique identifiers, and patient information can be accessed through the MIS available at all sites.

- Centro del Barrio has elements from all three prototypes. Both homeless and HIV programs operate from distinct sites linked to the central "core" agency, a pattern close to the "pure" ***hub-and-spoke*** approach. However, linkage among the sites was achieved through rotation of staff, case management and referral systems - elements of a ***linear*** approach. At the time of the visit, Centro had recently relocated its HIV program and the new clinic site was also beginning to provide general primary care to the surrounding community, a more ***unitary*** approach.

- Both Multnomah County and Clinica Sierra Vista reflect ***linear*** approaches because they have multiple separate sites without one dominant care facility, but they differ in their approach to information sharing. Multnomah County Health Department, operates identified special population programs out of multiple primary care clinics and special population sites; however, a sophisticated MIS system links the sites thereby moving this agency closer on the continuum to a ***hub-and-spoke*** approach. Clinica also has multiple primary case sites and specifically dedicated HCH and HIV sites, but does not have formalized MIS links for cross-registration among sites and programs, or for on-line sharing of medical information. The 10 clinics have developed various means of communication. Staff meetings across sites have allowed informal relationships to develop giving case managers access to services at another site. Some staff also rotate among sites increasing communication in that way.

Exhibit III.4 Organizational Arrangements Used by the Study Agencies



C. Organizing Specific Programs for the Homeless and HIV Population

This project reviewed services supported by several BPHC programs for high-risk populations: pregnant women, homeless, HIV-infected individuals and substance abusers. As previously discussed, services to pregnant women were generally provided in conjunction with "general" primary care services. Two of the agencies had Primary Care/Substance Abuse Linkage grants; Great Brook Valley previously received a Linkage grant, and was the only agency visited providing direct substance abuse treatment services. The other agencies arranged for these services through referrals to other community agencies.

1. *Organizing Services for the Homeless*

All of the agencies with homeless grants based their programs either in, or very close to, homeless shelters. Often these agencies had extensive outreach efforts to reach individuals living on the street or "by the river." None of these agencies located their homeless program(s) in conjunction with another medical clinic (either a primary care clinic serving a broader spectrum of clients or an HIV clinic).[3] Invariably, agencies reported that the clinic location was driven largely by geography -- i.e., programs were located "where the homeless are." As a result, it was, virtually by definition, impossible for any agency with homeless funding to adopt a full "unitary" model of organizing care.

Providing services in a homeless shelter has a corollary effect -- it leverages available resources without substantial cost to the agency. One good example is Centro del Barrio, where the Health Care for the Homeless program works closely with other community agencies (e.g., government employment program, Medicaid eligibility staff) based at the shelters. Discussions with the patients clearly showed that clients saw all these services as related and often would refer to the HCH program and the others as "the same agency." The result is an integrated service system for the homeless, based within the shelter.

Service organization may, to some extent, reflect program focus. Some agencies served more of a "street" population, often male with substance abuse and mental health problems. Others appeared to serve a population more heavily weighted with families, including both two-parent families and single-parent women and children. Centro del Barrio operates clinics in a family shelter, a battered women's shelter and a children's shelter; not surprisingly, women and children are a high proportion of the population they serve. Clinica Sierra Vista, on the other hand, is located in a community where a high proportion of the homeless are male, ex-offenders. Due to safety concerns on the part of staff, part of the program was recently moved out of the shelter and into a free-standing nearby location.

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[3]We understand that there are some Section 340 agencies who do not operate their programs in these locations, but none were included in this sample.

2. Organizing HIV Services

These agencies exemplified two distinct models or approaches for providing HIV *care:* (1) integrated with general primary care services or (2) discrete HIV service at a single location. Agencies tended to explain their organizational selection in different ways. For instance, one agency with an integrated HIV program stated that this reflected their philosophy that "HIV was a chronic disease and should be handled in the same manner as all other chronic conditions. " Another agency with a separate clinic stated that the separate location was established in response to HIV patient preferences.

Integrating HIV care with other primary care services would ***appear*** to be a "preferred" organizational approach, if only because treating HIV like any other chronic condition helps remove stigma. However, various other considerations may enter into the decision on how to structure an HIV Early Intervention service.

- ***Service area.*** Geographic dispersion of the population -- and the agency's other medical clinics -- influence HIV services. Where an agency serves an entire county (e.g., Maricopa and Multnomah County Health Department's) or where HIV patients appear to be concentrated in one part of the service area, a centralized location-- which may not be in the same locale as a primary care site-- may prove most attractive to the patient population. Conversely, if a primary care site is located geographically contiguous to the population in need (as at William F. Ryan and Great Brook Valley), integrated primary care and HIV services become more feasible.

- ***Population diversity. The*** HIV population is hardly uniform, and the epidemiology of HIV disease varies in different parts of the country. In its early years, most HIV patients were males, and services were organized in a manner intended to attract this population. It may, therefore, have been only natural that when Clinica Sierra Vista assumed responsibility for a pre-existing HIV program, serving a largely male population, the pre-existing location was also retained. To attract women (the fastest growing sub-group infected with HIV) and many minorities, service organization may have to change in response to the needs and desires of this population. For instance, Centro del Barrio recently moved their HIV program to a new free-standing site. The program had been operating out of an end-stage AIDS hospice, a location which female patients regarded as unattractive. The number of women served at the site increased substantially following the move. The new site has also begun to offer general primary care services to the neighborhood.

- ***Patient desires and medical needs.*** HIV Early Intervention programs serve patients in early stages of the disease -- and patients with full-blown AIDS. The population at these dedicated sites appeared to include a high proportion of

severely ill patients with low CD-4 counts and opportunistic infections. For these patients, specialized clinics may offer more up-to-date treatment options, greater opportunity for participation in clinical trials and reduced risk of further infection. Staff at Clinica Sierra Vista and Maricopa County also reported that their patients preferred separate clinics where they would not encounter others from their immediate community. On the other hand, patients who are not severely ill, particularly HIV-positive women, may prefer a location that can also provide more family-centered care for their children.

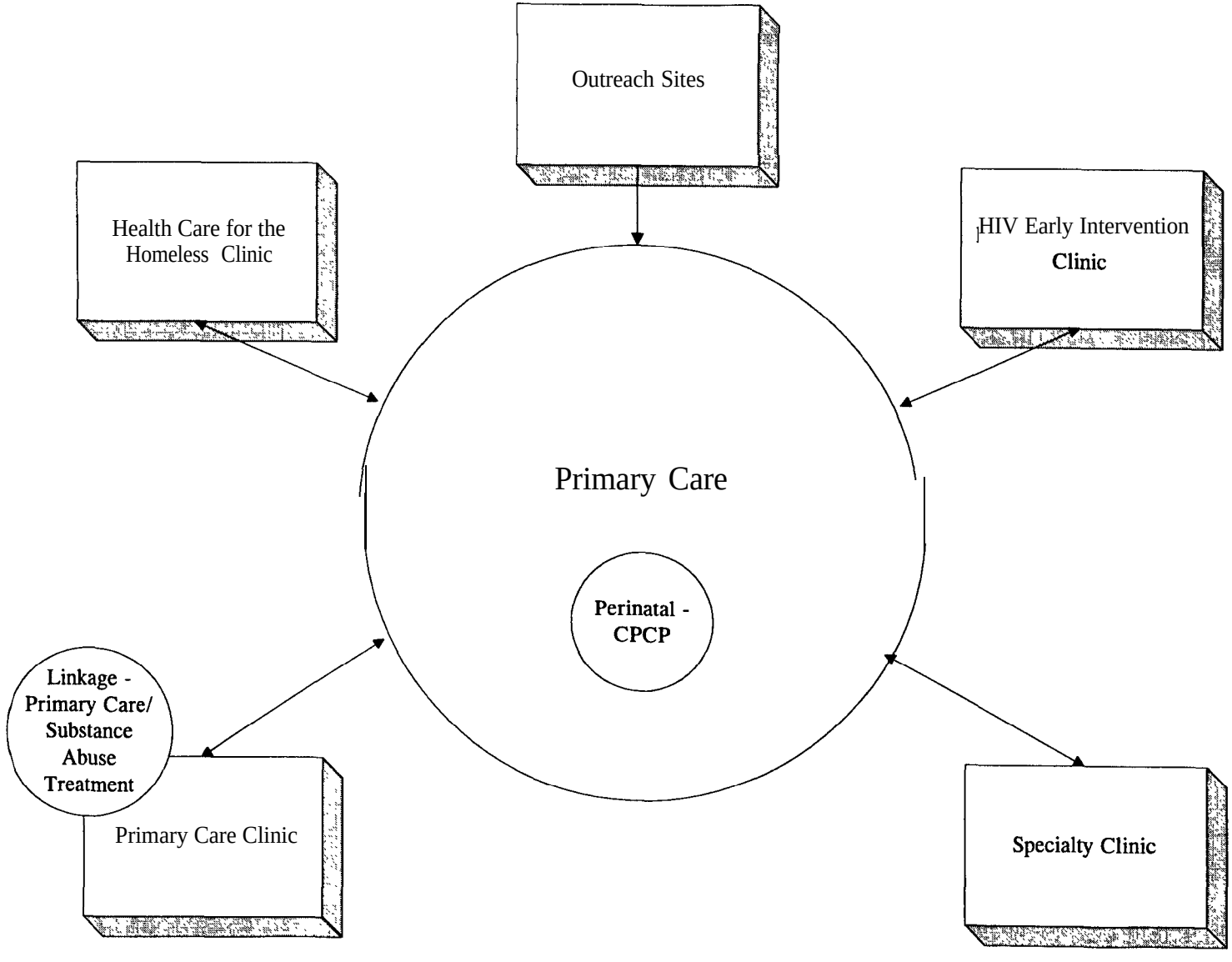
- ***Other available resources.*** Many HIV programs visited in this project were in Title I high prevalence cities (or epicenters) with specialized community resources to address the HIV/AIDS epidemic. One of the sites in this study (Clinica Sierra Vista) did not have such extensive local resources -- and recruited an Infectious Disease specialist for their program. This physician both consults at other sites in the Clinica system -- and has become a resource for the community at large on matters of HIV/AIDS treatment. In this instance, maximizing use of such specialized personnel may require a specialized clinic in a centralized location.

To an external reviewer, providing HIV services in a discrete location initially appears "less integrated. " However, such a judgment does not take account of the numerous other factors and extenuating circumstances that influence organizational patterns of care. Ultimately, ***the critical question regarding HIV service organization is not how the service is organized but rather whether individual patient care requirements are met in a coordinated manner and how patients respond to the service.*** With changing demographics, careful attention will be needed to assure that services and the clinical environment are congruent with the needs and desires of new patient populations and needs.

D. Summary

Organizational arrangements establish the parameters within which interrelationships among programs and staff develop. From the perspective of individual patient service integration as revealed in individual patient medical records, none of the three prototypes appeared preferable. However, each prototype only works to serve the needs of individual patients if it is built on a strong foundation of assessment, service delivery, and appropriate referrals and follow-up. As agencies develop multiple service delivery sites, the complexity of service integration increases especially when different categorical programs services are delivered at separate sites.

Exhibit III.2 Hub-and-Spoke Prototype



Clearly, each of these agencies has evolved a structure that blends pragmatism with elements of the prototypes. Factors that influence choice of organizational strategies include:

- *Geography.* It is noteworthy that the agencies closer to the *unitary* approach are operating in relatively compact geographic areas (e.g., Great Brook Valley and William F. Ryan). Conversely, the agencies with more linear approaches (e.g., Maricopa, CSV and Multnomah) are providing services throughout large and diverse counties.

- *Existing Structure. New* categorical programs build on or adapt to pre-existing organizations. For example, the agencies with a *linear* approach had previously operated multiple primary care (or similar) clinics and organization of the new special population programs may have naturally evolved from the pre-existing model. In some cases, an agency assumed responsibility for an existing program with an established mode of practice. For instance, Clinica Sierra Vista took over operation of the free-standing HIV program from another agency.

- *Special population.* While all these agencies received multiple BPHC special population grants, one "population" often emerged as a principal focus, due to a combination of community needs and levels of resources. William F. Ryan, whose service area includes one-third of Manhattan's HIV population has multiple grants and services addressing these issues. At Centro del Barrio, the "central special population" appeared to be the homeless while, at Great Brook Valley, it has historically been residents of the nearby public housing project. Engaging each of these high-risk populations in agency programs calls for different strategies -- and leads to differing organizations.

- *Role of third-party payment.* Most of the agencies reported relatively low levels of third-party revenue for services to special populations, with the exception of pregnant women. All agencies received significant Medicaid revenue for services to pregnant women. Both Multnomah and Maricopa County have been operating in a Medicaid managed care environment for some time giving an idea of how more mature programs are likely to operate. In both instances, the proportion of patients enrolled in the managed care plans appears substantially higher than levels of capitated revenue. In Multnomah, 17 %-20% of homeless and HIV program users are enrolled in Medicaid managed care; while the programs received about $140,000 (homeless) and $215,000 (HIV) in Medicaid revenue, only a small amount was from pre-paid capitation ($10,000 and $44,000 respectively). In Maricopa, about 7%-8% of revenue for each program came from AHCCCS and ALTCS[2].

[2] AHCCCS-Arizona Health Care Cost Containment System; ALTCS-Arizona Long-Term Care System.

Each of the prototypes is more appropriate to different pragmatic circumstances.

- Because the ***unitary*** prototype integrates all services in a single location, both for its general and special populations, it offers strong potential for maximizing use of a common staff and intra-agency communications. Pragmatically, this approach may be appropriate only for agencies in circumscribed geographic areas. Even in these instances, it may not be the most effective manner of organizing homeless services, unless the agency's principal clinic site is located near areas where the homeless tend to congregate.

- A ***hub-and-spoke*** approach integrates multiple clinics (primary care as well as special population outreach sites) with the resources and staff housed at a central location, and links patient information among all sites. Management information systems tend to be more developed to enhance communication among sites and with the central core. However, if this information sharing is limited to minimal registration information, rather than more substantive clinical information, coordination for individual patients may ultimately depend on personal relations and case management.

- The ***linear*** prototype integrates care for individual patients in multiple primary care and special population programs through case management and staff networks, not management information systems. In this study, the prototype was observed among agencies whose service responsibilities cover entire county or multi-county areas, and whose management information systems tended to be less sophisticated. Since the approach relies on personal relationships across sites and with patients, it is potentially vulnerable to discontinuities when staff turnover occurs. Successful implementation probably requires good methods for transition in these circumstances.

In organizing HIV services, agencies must strike a balance among complex factors -- population dispersion, diversity of patient needs, patient desires and agency philosophy. In some instances, this balance comes down on the side of a service integrated with general primary care; in other cases, it results in a distinct HIV service site. These patterns will probably continue to evolve, particularly as individual agencies respond to changes in their patient populations. For instance, agencies whose caseloads are now largely male may see increasing demand for services from HIV-positive women with few outward manifestations of the disease. Facilitating access for these women may mean providing care for their (HIV-negative) children at the same location -- an event that could force reorganization of an HIV program. Conversely, other agencies may see increases in severely ill patients, and have to consider the best method of providing specialty services and avoiding risks of opportunistic infections. In short, flexibility and adaptation is the watchword as agencies seek to respond to changing needs among patients with HIV disease.

IV. THE PROCESS OF CARE: THE PATIENT'S PERSPECTIVE

One theme drives the process of organizing patient care: find the appropriate "medical home" for each patient. The type and location of that medical home depend upon the hierarchy of patient conditions, co-morbidities and disease stage. Pregnancy tends to assume first priority, followed by presence of HIV disease. Once the hierarchy of medical needs is established, organizational attributes and patient preferences contribute to identifying the specific program (or site) where a patient receives the majority of care.

While delivery systems are often structured to fit agency administrative and organizational preferences, patients present multiple medical needs and risks that often cross programmatic boundaries. The manner in which these needs are addressed is influenced by three related factors:

- the nature of a patient's medical conditions and related problems;
- associated risk and care priorities;
- the specific site where the patient seeks care (e.g., general primary care site or special program).

This chapter explores service integration through the patient's eyes, by charting the process and programs a patient encounters as he/she moves through the care system -- from registration to receipt of services. Because this project is concerned with four clinical conditions that encompass both medical and social risks (e.g., pregnancy, homelessness, HIV and substance abuse), there are numerous permutations. To simplify this discussion, we follow the track for two types of patients: (1) a pregnant woman and (2) an HIV-positive male.[1] In both instances, we describe, first, an assessment and care process for a single condition and then discuss variants for patients with more complicated problems. The effect of different delivery system models is highlighted as relevant.

[1] **All patients described here are composite sketches, based on** chart reviews and patient discussions during the site visits: **all** names are invented.

A. Pregnant Patient

> ***Maria is an eighteen-year old with one child. Both she and her child are established users of the program. She has made an appointment for this visit, because she thinks she is pregnant.***

As part of intake, women of childbearing age, whether new or established patients, are typically asked, "When was your last menstrual period"? If there is a probability of pregnancy, as in Maria's case, she receives a pregnancy test. A positive pregnancy test initiates referral to the perinatal program. Depending upon the agency, that program may be comprised of:

- An Obstetrics department, with OB/GYNs, nurse midwives and/or nurse practitioners and dedicated perinatal case managers. (e.g., William F. Ryan)

- A family practitioner, serving perinatal and/or other primary care patients, teamed with a dedicated perinatal nurse and case manager. (e.g., Great Brook Valley)

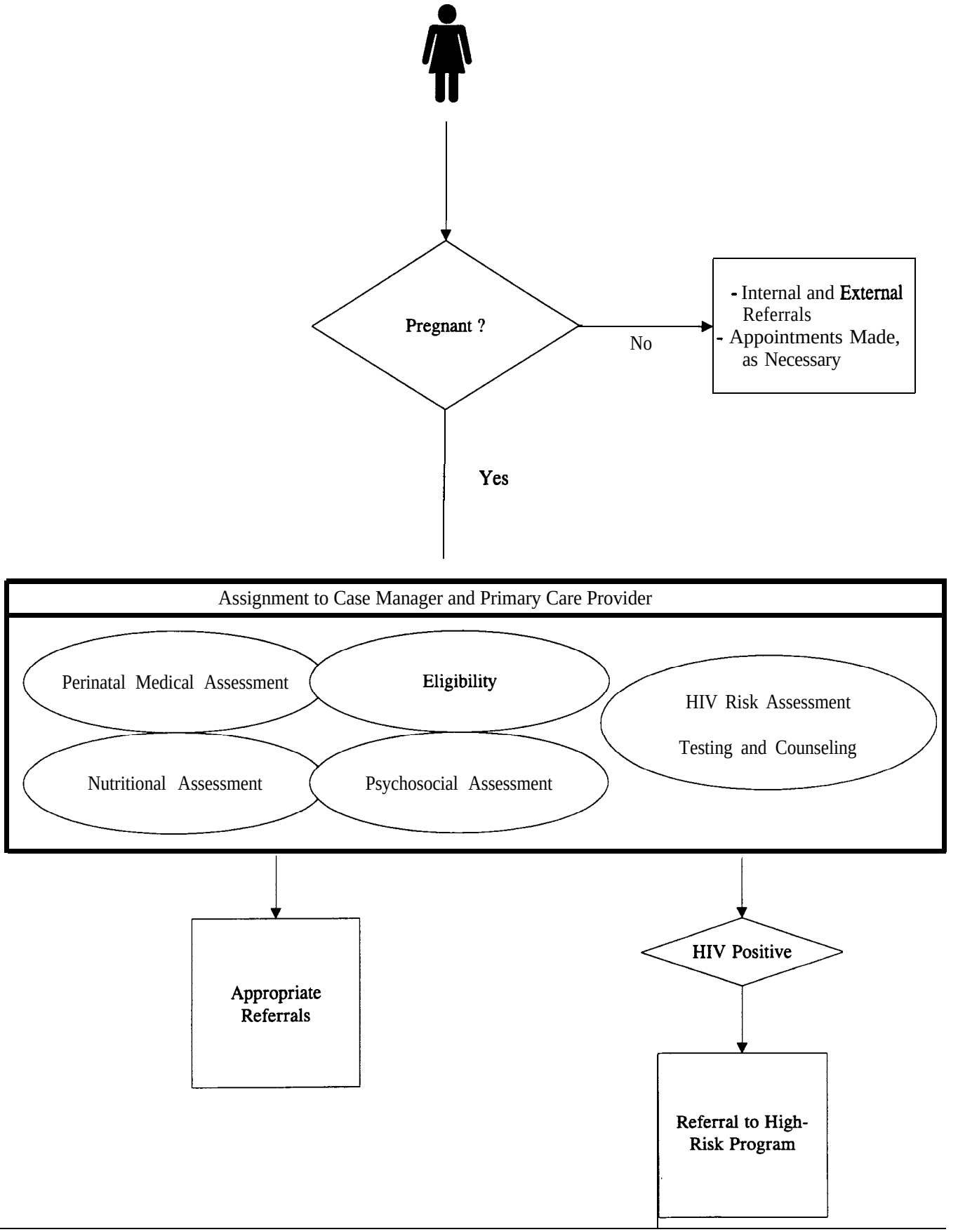
Pregnancy sets in motion a perinatal assessment along multiple dimensions, covering medical, psychosocial, HIV risks, nutritional and other assessments. All these agencies use standard perinatal assessment forms (e.g., Hollister). All offer HIV counseling and testing to pregnant patients and follow "076" protocols for treatment of HIV-positive patients. The agencies with perinatal programs (all but Maricopa) also provide assistance in obtaining Medicaid and WIC eligibility; Clinica Sierra Vista, Great Brook Valley, Multnomah, and Ryan have WIC programs on-site, and WIC was available at the shelters where Centro del Barrio provided service.

Results of the initial perinatal assessment triggers referrals to a variety of services both within and outside the agency. Exhibit IV. 1 illustrates the types of assessments and referrals a patient like Maria might receive.

- The multi-site agencies provided comprehensive perinatal services at some, but not all, clinic sites. If Maria first used a site that did not have a perinatal program, she would generally be transferred to the site with those services.

- Because the range and scope of supportive services available through the agency varies significantly, the mix of services a patient receives from in-house staff versus referrals to other agencies will vary as well. For instance, Great Brook Valley and Multnomah County provided both substance abuse and mental health services in-house. William F. Ryan has a mental health department, and Centro del Barrio has a family and adolescent counseling program. Clinica Sierra Vista has special services for pregnant and parenting teens, funded through the State of California.

Exhibit IV.1 Illustrative Case Process: Pregnant Patient



Among these agencies, pregnancy care tended to assume priority, even when combinations of medical and social problems coexisted with pregnancy. In other words, ***a pregnant patient, regardless of other risks, was referred to an appropriate perinatal program as soon as pregnancy was determined.*** This hierarchy of referral is not surprising, since pregnancy is a time-limited immediate condition for which protocols and standards of practice are clearly defined. In addition, all these agencies were well aware of the importance of effective perinatal care and saw reducing infant morbidity and mortality as a priority concern. Finally, some agency perinatal programs appeared to be relatively better endowed through their BPHC funding, state and local grants -- and, of course, Medicaid eligibility for pregnant women. As a result, the perinatal programs sometimes had more financial resources and staffing for case management and provision of other enabling services.

1. *The Pregnant Homeless Patient*

To illustrate the hierarchical pattern of care referral, we first discuss a pregnant homeless patient and then a patient who is HIV-positive or a substance abuser.

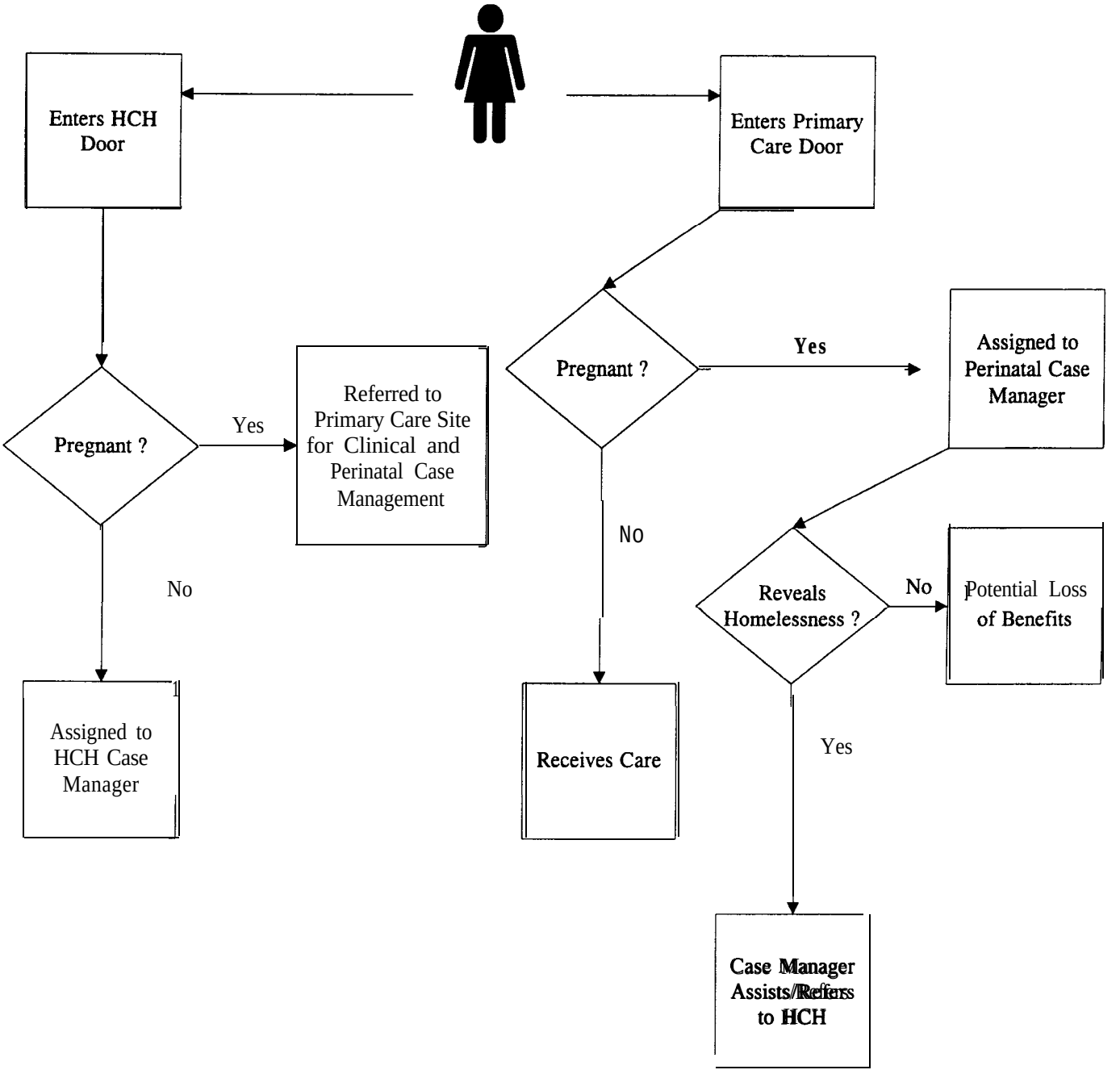
> ***Susan is 18 years old and pregnant with her second child; Susan is also homeless.***

While Susan receives the same perinatal assessments as Maria, the path she follows through the delivery system will vary, depending upon where she first presents for care. Exhibit IV.2 illustrates the potential paths a homeless, pregnant woman may follow.

a. Entry through the "homeless" door. If the patient resides at a shelter, or first enters care at a Health Care for the Homeless site, the initial assessment will focus on housing and employment needs as well as medical/social status. Most of the HCH agencies visited in this project did not operate comprehensive perinatal programs at their HCH sites. Therefore, when Susan's pregnancy is identified, responsibility for her medical care would likely be transferred to perinatal staff at another location, often a central primary care site operated by the agency. Two exceptions to this practice were observed:

- Centro del Barrio (CDB) may also refer pregnant homeless patients to the University hospital perinatal clinic, since that clinic is physically closer to the homeless shelters than the central CDB location. Although CDB provides transportation to their central location, staff indicated that some homeless patients prefer to receive care at the University clinic. Physical accessibility was viewed as an important contributor to keeping patients in continuous perinatal care.

Exhibit IV.2 Illustrative Case Process: Homeless, Pregnant Patient



- The Maricopa County Health Department attempts to manage some homeless pregnant patients from the homeless site, unless the pregnancy is medically high-risk and requires referral to a hospital-based program. The Maricopa County Health Care for the Homeless program is an independent agency, not directly tied to a general primary care clinic. Primary care clinics in Maricopa County are operated through the Maricopa County Health System, which is separate from the Department of Health that runs the HCH program.

Homeless program staff may continue to follow a pregnant patient if she is referred elsewhere for perinatal care, but the nature of this continuing relationship differs, depending upon the resources of the agency's homeless program. For example, CDB case managers based at the homeless shelters provide child development and counseling services to the woman and her children. William F. Ryan's homeless shelter program provides assistance with substance abuse and mental health issues to patients receiving perinatal care at Ryan's main primary care site.

b. Entry through Primary Care Door. At intake/registration, a patient is always asked for an address; the assessment process often includes inquiry into the type of living arrangement and whether the arrangement is safe. ***If Susan entered care at a primary care center, the program might not be aware of her living arrangements on initial intake -- although this information is likely to emerge during her on-going perinatal care. Staff*** indicated that clients do not always reveal the nature of these living arrangements, particularly in instances where a woman fears losing custody of her children. Equally important, some of the programs do not consistently pursue determination of homeless status. For example, in Multnomah County, information on homelessness is on the intake form, but staff are not required to ask the question. Similarly, William F. Ryan indicated that they did not know how many patients seeking care at the general primary care site are also homeless.

The pregnant woman who enters through the primary care door tends to be assigned to a perinatal case manager who helps her develop a stable housing situation, if the problem is revealed. She may also receive assistance through the homeless program, if resources are available. Clinica Sierra Vista (CSV), which has multiple grants for perinatal services, illustrates how an agency may tailor programming for a pregnant woman. CSV has two adolescent programs providing extensive support, including housing assistance, to pregnant and parenting teens. All teens in school (like Susan), who are also receiving cash assistance, will be enrolled in CAL-Learn, a program that provides housing assistance and has a longer period of eligibility than the general perinatal program.

Since most pregnant women are eligible for Medicaid, enrollment with a homeless program may provide few additional benefits for the majority of patients. However, for those women ineligible for Medicaid (e.g., new residents and/or undocumented persons) receipt of prenatal care through a homeless program can be advantageous. Homeless program patients with incomes below poverty are not charged for services -- and remain eligible for one year after they obtain

housing. The homeless program may offer employment and housing assistance not otherwise available to a patient. An outreach worker at one agency indicated that she would record a patient as "homeless" on intake, if this would assure that she did not have to pay for services.[2]

2. ***The Pregnant Patient who is HIV-Positive or Substance Abusing***

> ***May is a 27-year old IV drug user, pregnant with her third child. Her perinatal assessment included counseling on HIV. She agreed to the HIV test, which came back positive.***

To date, these agencies had seen few HIV-positive, pregnant women, although prevalence appears to be increasing as the epidemiology of the disease changes. All the agencies regard HIV-positive pregnancies as high-risk -- and most refer patients to a high risk pregnancy program at a hospital or university for perinatal care. However, follow-up and case management services continue, both to address additional services needed and to assure that the patient will have a medical home for herself and her child after the delivery. For example, at Great Brook Valley and Centro del Barrio, social work case managers assist the woman during her pregnancy, even though her medical care is provided through the hospital-based program. At Clinica Sierra Vista, a woman with cervical dysplasia would usually receive perinatal care from a hospital-based program, but would continue to come to the HIV specialty clinic to receive regular AZT treatment.

With a growing number of HIV-positive pregnant women presenting for care, referral patterns may change in the future. William F. Ryan, which recently re-established its perinatal program,[3] is committed to managing perinatal patients throughout pregnancy. At the time of the site visit, they had established detailed protocols, following ***076*** guidelines, for management of care for HIV-positive pregnant patients; Ryan will probably refer very high risk patients (e.g., with low T-cell counts) to hospital-based programs. Centro del Barrio and Clinica Sierra Vista were also considering whether they should retain prenatal care management of some HIV-positive pregnant women.

If a pregnant woman is found to need ***substance abuse*** treatment, the perinatal case manager will help with referrals and monitoring. Across the board, agencies highlighted the limited availability of mental health and substance abuse services generally-- especially services for pregnant women--as a significant gap in local service systems. This is particularly

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[2]It was not clear whether this was a common practice, or the idiosyncratic behavior of one individual. Administration stated the practice was not formal policy, and that only patients using the homeless program site were to be "coded" as homeless.

[3]**Ryan temporarily discontinued its perinatal program, rather than agree to have patients delivered by hospital residents.**

for pregnant women--as a significant gap in local service systems. This is particularly unfortunate, in that a woman's wish to have a healthy child can be a strong motivator for getting off drugs. Some agencies, (e.g., Great Brook Valley) have developed in-house substance abuse programs due to difficulty in accessing AOD and mental health services. Similarly, Multnomah has sought to address the psychosocial problems by hiring many nurse practitioners with mental health training. William F. Ryan operates a distinct mental health department and Centro del Barrio has an adolescent and family counseling program, including child development specialists on staff.

B. HIV-positive Patient

> ***Juan is a 30-year old construction worker who comes to the agency because he is "'not feeling well; " his HIV test is positive.***

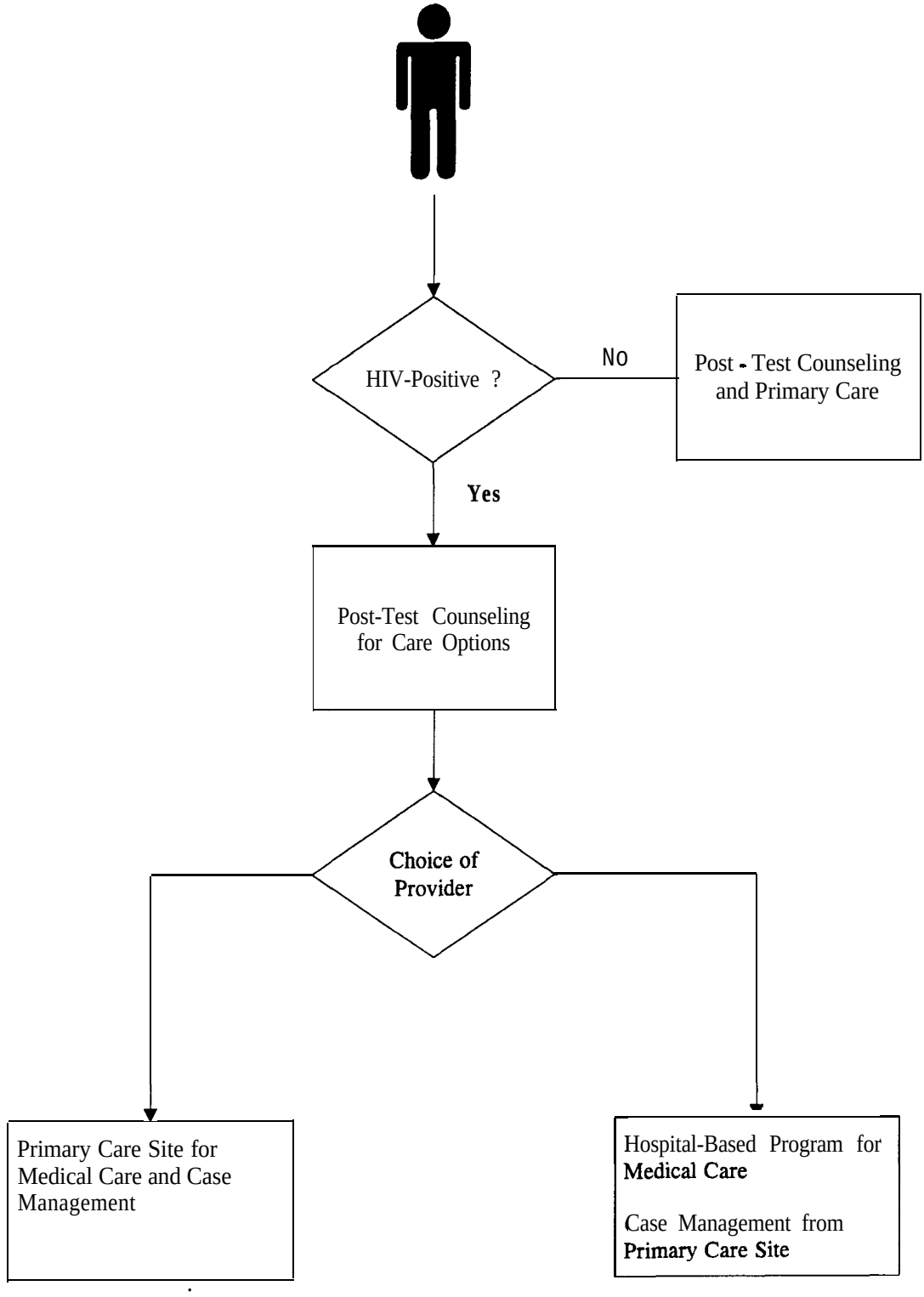
All the agencies offered HIV testing and counseling at virtually all their sites, whether designated as "the HIV program" or not. Additionally, many conduct HIV-related outreach in the community and support counseling and testing in halfway houses, jails, substance abuse centers and community centers. William F. Ryan operates a fully-equipped mobile clinic (the SHOUT van) which provides services to at-risk youth throughout upper Manhattan.

The path an HIV-positive patient follows depends upon how the agency has organized its HIV care. As discussed in Chapter 3, two distinct organizational models for HIV services were observed.

- **Unitary HIV service.** (Exhibit IV.3) If Juan were a patient at William F. Ryan or Great Brook Valley, his medical care would be managed by an internist or family practitioner -- who might be his previous physician if Juan had used the center in the past. The center would use infectious disease consultants (or refer him to specialists) as appropriate to the progression of his disease. He would be assigned a case manager who is knowledgeable and experienced with HIV; the case manager would be responsible for counseling, assessments and social service referrals. At William F. Ryan, case managers also work with patients who receive medical care from other community providers (e.g., a patient receiving all medical treatment at a hospital can participate in the Ryan case management counseling program.)

- **Distinct HIV site.** If Juan were a patient at Maricopa, Multnomah, Clinica Sierra Vista and Centro del Barrio, he would be referred to the HIV treatment program for further assessments, covering medical, psychosocial, nutritional and substance abuse issues. A counselor from the HIV program might participate in his first

Exhibit IV.3 Illustrative Case Process:
HIV Patient at a Unitary Program



post-test counseling session at the main site, to provide a smooth transition. He would receive ongoing case management and medical services (including AZT) through the HIV program site. Depending upon his additional needs, and the scope of services available at the agency, the assessment would trigger additional services both within and outside the clinic.

Not surprisingly, the presence of HIV disease structures the manner in which care is rendered for all other risks. As previously discussed, a pregnant woman who is also HIV-positive will be referred to a specialized perinatal care program. Similarly, a positive HIV test is the defining condition for organizing care for homeless and/or substance abusing patients.

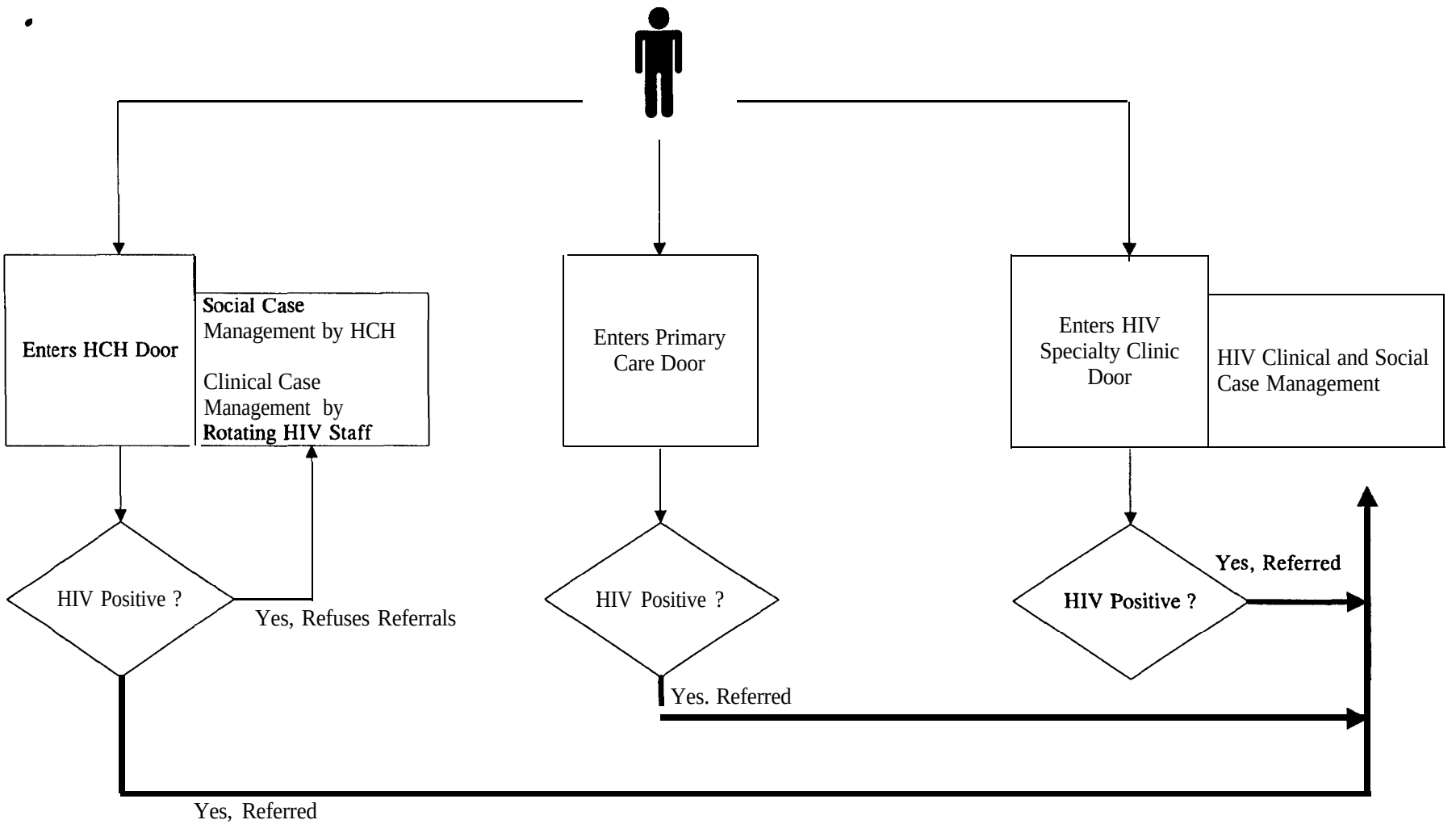
> ***Tom is a 50-year old Vietnam War veteran, who is an IV drug user. He has recently been released*** from ***jail and is currently living "on the streets." On visiting the HCH clinic for a severe bronchial infection, he agreed to an HIV test which came back positive.***

Whether a ***homeless person*** accesses care through a primary care site, a homeless care site, or an HIV site, he/she will be referred to a provider experienced in caring for those who are HIV-positive.[4] Multi-site agencies generally prefer to refer an HIV-positive client to an HIV specialty clinic. (See Exhibit IV.4 where the heavier lines indicate the preferred referral patterns) But agencies recognize the overlap between HIV disease and homelessness and the fact that many homeless persons are unwilling, for a variety of reasons, to go to other locations for care. For example, Multnomah County indicated that street people perceive the storefront homeless clinic as more "user friendly" than the high-rise office building that houses the HIV program -- and patients may choose to remain at the HCH clinic and receive care from HIV specialists who rotate through the clinic.

The overlapping needs of homeless and HIV patients illustrate how agencies adjust their organizational arrangements to accommodate patient's clinical and social requirements. These agencies have either developed HIV-capacity at their HCH sites and/or close referral arrangements between the homeless clinic and the HIV program. For example, HIV case managers at Centro del Barrio regularly assist the homeless program staff in counseling patients who have received an HIV-positive test result. The infectious disease specialist at Clinica Sierra Vista's lo-site system visits the in-town homeless center and outlying rural primary care sites on a regularly-scheduled basis. This is the only HIV resource for a several county area and the county hospital.

[4] Maricopa County was the major exception to this rule. The HIV and HCH programs are less likely to refer between their programs; the Linkage Program staff tie together the necessary resources for their clients across sites.

Exhibit IV.4 Illustrative Case Process:
Homeless Patient at Program with Distinct HIV Site



Despite these arrangements, however, most patients receiving services from agencies with distinct HIV programs tended eventually to be transferred to the HIV program for their medical care. In large part, this reflects the nature of HIV disease, and the need for specialized monitoring of patients who are on various drug regimens. One agency noted an additional consideration; patients officially enrolled at the HIV program were eligible for participation in clinical trials.

As with pregnancy, multi-risk HIV patients may fall into a particular "category" that makes them eligible for particular services. For example, Clinica Sierra Vista noted that availability of Housing of Persons With AIDS (HOPWA) funds to assist low-income individuals with HIV/AIDS in obtaining suitable housing actually made it "easier" to find housing for someone who is both HIV-positive and homeless than for those who are just homeless. Similarly, in Portland, a local organization recently opened housing for patients who are HIV-positive and in drug treatment programs. Persons receiving housing assistance through HOPWA may not be recorded by the agency in its information system as "homeless. "

Substance abuse appears to present more complex problems for these agencies, largely because the available resources for treating substance abuse are seriously constrained. While Great Brook Valley had a substance abuse detoxification program -- and Multnomah and Maricopa received primary care/substance abuse linkage grants, all agencies often referred clients to other community agencies for substance abuse services. All participating agencies highlighted the limited availability of substance abuse services in their communities[5] and the difficulties of treating multi-risk patients unless the substance abuse problem is resolved.

C. Patient Perceptions of the Services They Receive

It is well known that the patient's perception of needed services may not concur with views of providers. Even when the "list" is similar, priorities can vary significantly. Since effective coordination and integration of services ultimately requires good patient/provider communication, patient views offer critical insights into the coordination process.

1. *Access to Care*

Informal patient discussion groups were conducted at all sites; in total, about 50 people participated. ***Regardless of location*** or *patient's* ***medical condition, one consistent theme emerged from these discussions. Most patients "loved the center" and the staff***. Many described the staff as literally saving their lives.

[5] The problems mentioned by Centro del Barrio were probably most severe -- not to mention unusual. The Texas state department responsible for funding substance abuse services had just declared bankruptcy.

- A monolingual Hispanic woman described her experience after her child witnessed the murder of his father. They were initially refused psychiatric services and it was only through the efforts of the program's bilingual, bicultural social worker that the child and family ultimately received hospitalization and ongoing therapy.

- A homeless man who was dying of renal failure stated, "They found me even though I didn't want to be found." He is now receiving dialysis. Other homeless patients described how staff working "in the streets and at the river bottoms" encouraged them to seek services.

- Formerly incarcerated women in Multnomah County told how the program nurse and case managers assisted them in re-enrolling in Medicaid, entering substance abuse counseling/treatment programs, delivering healthy newborns, and "staying clean" so that they could enroll in school or obtain jobs, and keep custody of their children.

For many of these patients, ***outreach workers or case managers were the*** *principal* ***link to care.*** Almost all participants described a caring, nurturing relationship and trust based on being treated with dignity and respect regardless of their circumstances. One patient commented that the case manager "steers me in the right direction and ties up loose ends." In many instances, the outreach worker/case manager was the source of the patient's first contact with the program, and those initial relationships had grown over time.

Geographic accessibility and enabling services were consistently referenced and highly valued. Most patients, however, understood the need to travel for specialty referrals and did not appear to mind receiving services at different locations as long as transportation was available. All the agencies provided assistance to many clients through vans, tokens and even gas vouchers. To these patients, the enabling and supportive services (e.g., food, transportation, shelter, clothing, mental health, substance abuse counseling and treatment, education and employment assistance, eligibility assistance) received through the programs were as important as medical services. Clinical services that were highly valued include: dental service, podiatry, CPR instruction, opthomology, infectious disease specialists, and access to other medical specialties. Dental services for children were particularly referenced by some homeless mothers as their first contact with the program.

2. ***Views of Care Coordination***

Few patients cited specific coordination issues within the programs -- perhaps partially because of the ***extreme difficulty many had experienced in accessing services prior to contacting the agency.*** HIV-infected individuals stated they had to wait several years for medical or SSI benefits because they weren't "sick enough". Homeless persons, especially men and women who were not pregnant, described great difficulty obtaining medical insurance, SSI support and necessary clinical and social services, before they had come in to the specific homeless program.

Families where children were legal US residents, but parents were not, had feared interacting with hospitals for care either for themselves or their children -- and often waited too long before seeking medical help.

- One woman described a previous pregnancy, when she was denied treatment for premature labor at a private hospital because she had a letter from Medicaid, but did not have her official Medicaid card. Pregnant again, she was enrolled in a CPCP program -- and did not anticipate similar problems this time.

- Homeless patients in San Antonio were quite aware that the program had a "special arrangement" with the hospital to expedite processing of patients referred to clinics for specialty services. They were equally aware that others did not benefit from these arrangements.

Equally important, most patients were unaware that they received services from multiple funding streams. This was particularly true for HIV patients whose services were frequently supported by a combination of Ryan White Titles I, II and IIIb, HOPWA and state-funded drug assistance programs. *The only instance where patients appeared aware of different funding streams was when they had to go through separate intake evaluations for the programs.* This particularly occurred where the agency had separate categorical grants serving a similar population (e.g., Clinica Sierra Vista's multiple perinatal programs), and patients were aware of the name of the program in which they were enrolled. When asked, patients said that the multiple intake, when conducted in a manner obviously related to improving their care, helped them to develop rapport and relationships with the staff.

Separate intakes are one example of situations where patient and professional perceptions and priorities may differ. Another, interestingly, is maternity care -- where standards increasingly call for the same practitioner to provide prenatal and delivery care. At several agencies, patients were delivered by hospital staff who had not been involved in the patient's prenatal care. When asked about this practice, *most of these women did not appear troubled by these arrangements, and commented that their case managers maintained contact with them at the hospital.* Some also noted that they were only in the hospital for 24 hours -- and that having a physician who "knew what he was doing" was their most important concern. The extent to which this apparent incongruence between patient views and general professional views reflects patient expectations and experience, not patient preference, is not known. Patients were not directly asked what they would choose, if given a choice.

While patients were clearly satisfied with their providers and the care they received, they naturally used the opportunity of these discussions to express concerns, two of which were particularly relevant to service coordination questions.

- *Waiting time.* Patients disliked double booking, "block appointments," long waits for discharge from the clinic, laboratory, and pharmacy, and waiting to receive a

follow-up appointment. They also appeared keenly aware that part of the problem was due to inadequate staffing, and particularly suggested that centers have additional staff for registration and discharge.

- ***Staff turnover.*** Changes in personnel can be very upsetting, particularly among patients who have developed close relationships with particular case managers. Some felt that individual knowledge and "savvy" of accessing internal and external services was sometimes lost in the transition. While patients recognized that it is impossible to eliminate turnover, they suggested more training and orientation to facilitate the transition.

D. Summary

Regardless of approach or organizational arrangement, one theme emerges: ***find the appropriate "medical home" for each patient.*** The type and location of that medical home depends upon the hierarchy of patient conditions, co-morbidities and disease stage. Pregnancy tends to assume first priority, followed by presence of HIV disease. This order is flexible and may be adjusted depending upon severity of disease. For example, a substance abusing, HIV-positive client may not have any manifestations of HIV disease. For this patient, addressing the substance abuse problem may be the most immediate concern, and the agency may transfer care to a community agency specializing in substance abuse care.

Once the hierarchy of medical needs is established, organizational attributes and patient preferences become pertinent to identification of the appropriate medical home. For example:

- A multi-site agency may generally transfer HIV-positive patients to their specialized HIV program. A homeless patient, however, may have an established relationship with staff at the homeless clinic prior to the HIV diagnosis. If maintaining that relationship is important to keeping the patient in care, the patient will continue at the homeless program, with support from HIV staff.

- Agencies with several grants addressing a similar medical condition will consider other social factors in planning a patient's path through the system. The teenager at Clinica Sierra Vista who can receive a more comprehensive package of services by registering with CAL-Learn rather than receiving services only through the general perinatal service is such an example.

To patients, case managers are often the principal link to care, and the relationship developed with that individual can be the key ingredient in assuring coordinated services. The case manager does more than facilitate access to clinical and enabling services of high value to patients. Patients see a caring trusting relationship with the case manager that helps them to work their way through the system -- and ultimately motivates them to continue in care. Outreach workers who are usually indigenous appeared to add an extra layer of support in coordination.

V. A CLINICAL PERSPECTIVE: INDICATIONS OF SERVICE INTEGRATION BASED ON CHART REVIEWS

Ultimately, the question is not how the agency organizes to achieve service integration, but rather whether patients receive the range and scope of services required. By and large, the charts pointed towards coordinated services, particularly for perinatal and HIV-positive patients -- and highlighted difficulties agencies face in coordinating services for the homeless. They also revealed significant co-morbidities among these populations, far beyond the immediate "risk" that brought them under the umbrella of our consideration.

Integration of services for multi-risk patients depends upon tying together an array of medical and social services, provided both by the agency and by other community organizations. Ultimately, the question is not ***how the*** agency organizes to achieve this objective but rather ***whether*** patients receive the range and scope of services they require. This chapter provides a clinical perspective, drawing on a limited number of chart reviews conducted both to expand our discussion of the service integration process and to ascertain whether such an approach would be useful to BPHC in future assessments of this type.

A. Methodology

Medical and case management records for fifty-two patients at five of the six agencies' were reviewed by a physician familiar with provision of care to high-risk special populations. An abstraction form was developed for the reviews, drawing on elements in the Primary Care Effectiveness Review. The forms included information on: (1) patient demographics; (2) case management; (3) clinical services and referrals pertinent to each type of patient (e.g., perinatal, HIV). Copies of the abstract forms appear in Appendix B.

Agency staff were asked to identify and pull charts for patients who fell into the multi-risk groups covered by this project (e.g., pregnant, HIV-positive, substance abusers and/or homeless). The charts were not randomly selected, and the number reviewed was quite small. The chart review provides insight into the complex nature of multi-risk patients, the services they require and the manner in which these agencies met those needs.

Exhibit V. 1 presents information on characteristics of patients in the chart reviews.

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[1]Arizona confidentiality statutes precluded review of medical records at Maricopa County Health Department. Records review for a project of this type requires specific patient consent and review by an Institutional Review Board.

Exhibit V.l Summary Characteristics of the Chart Review Patients

- A total of **52** charts were reviewed, including 34 females and 18 males.
- Twenty-four of the 34 females were pregnant, 10 of the 18 men were homeless.
- Nearly 40% were homeless; about half (24) were pregnant; 17 were HIV-positive.
- Twenty-two of the patients had multiple risks: 5 were HIV-positive and pregnant; 5 were substance abusers and pregnant; and 5 HIV-positive substance abusers.
- One-third of the men and one-third of the women were HIV positive.
- Of the 52 patients: 19 were uninsured, and 31 were either receiving or applying for Medicaid. All pregnant women but one were either receiving or applying for Medicaid.
- All but 3 of the 52 patients had a case manager. Eighty percent had one case manager-- nearly 16% (8 patients) had more than one case manager. All eight patients were HIV-positive; four of the eight were also pregnant women.
- Of the 49 patients with case managers, 13 had medical and case management records in one chart; 36 had medical and case management records in different charts.
- Of the 17 HIV positive patients, six were prescribed AZT; 5 were prescribed DDI.

B. Evidence of Service Coordination

By and large, the charts pointed towards coordinated services, particularly for perinatal and HIV-positive patients; they also highlight difficulties agencies face in coordinating services for the homeless. Equally important, the chart reviews suggested significant co-morbidities among these populations, far beyond the immediate "risk" that brought them under the umbrella of this project -- and surfaced potential clinical issues that BPHC may wish to explore further.

For purposes of this review, "coordination" was defined as ***documentation of assessments, provision of clinical and social services according to the assessments, collaboration among practitioners, and evidence of "closed-loop internal and external referrals " (e.g., results and follow-up on referrals documented in the chart).*** The same definition of coordination was applied, regardless of how agencies organized their charts. At some, case management and medical charts were combined in a single record. At others, the two were separate although summaries of case manager notes might appear in the medical chart. For our purposes, services were considered "coordinated, " if documented in either of the charts.

Using this definition, most agencies revealed a high degree of coordination of care and closed loop referrals. Referrals were not considered complete until patients were seen by referral providers and results were documented in the charts. However, the charts sometimes included limited information on referrals to private hospitals for non-maternity hospitalizations -- a problem that likely reflects the difficulties agencies report in receiving complete feedback on these hospitalizations.

Perinatal charts revealed the highest level of case management, planning, and closed loop referrals. Delivery and postpartum records were available, even in those instances where patients were delivered by hospital residents, not agency staff. This may partly reflect the standard format for perinatal charts, which incorporate case management, laboratory results and physical findings into the body of the clinical record. It may also reflect availability of funding for perinatal case management and grant requirements under CPCP and SIMRI for frequent patient contact documentation and post partum tracking of mothers and newborns.

Charts for ***HIV infected*** individuals also revealed a high degree of planning, coordination and closed loop referrals. Again this was probably reflective of additional funding for case management as well as the frequent contacts and sharing of staff between hospitals and ambulatory sites that occurred at some of these agencies. Where medical treatment was provided by hospital personnel, the case manager's records would generally include both social services and medical information from hospitals and clinical trials. The latter would then be transferred to the patient' s medical record.

Homelesspatient charts were mixed. While there was extensive documentation for persons living in transitional shelters, the charts for "street people" and transient users of health centers were leanest in terms of documenting case management and integration of services. Charts for the homeless also pointed towards extensive verbal communications among staff and with patients -- a method of coordination that may reflect episodic contacts and treatment, coupled with street outreach and case management for this population. Charts also indicate high numbers of "no shows, " perhaps reflecting both high rates of uninsurance and the transient nature of the population, high prevalence of substance abuse and mental illness, and high case manager caseloads.

1. ***Specific Services and Testing***

Laboratory testing was usually consistent with standards of care and was best documented for prenatal patients. Tuberculosis was the only condition for which screening was not consistently conducted. There was also substantial variability in screening for streptococcal infection among pregnant women. For HIV patients, laboratory testing was easier to discern in those centers utilizing flow sheets. Many HIV patients participated in clinical trials, and sometimes were hospitalized by clinical staff at other agencies. In some instances (e.g., William F. Ryan and Great Brook Valley), laboratory results were acquired by the case managers who served as the bridge between the hospital and ambulatory sites. Both Multnomah and Centro del Barrio shared clinical staff with hospital programs, a pattern also found for HIV positive perinatal patients at Clinica Sierra Vista and Great Brook Valley. This staff sharing appeared to enhance available information.

Enabling services were clearly offered and highly utilized by perinatal and HIV patients as well as their families. Records included extensive documentation of multicultural, multilingual assessments, even to the extent of asking about complementary therapies and spiritual healers (e.g., curanderos). Mental health services, substance abuse counseling and referrals, nutrition counseling, health education and safer sex education, and eligibility assistance were clearly offered and utilized.

Medication compliance again was highest for prenatal and HIV patients. This appeared to be directly related to availability of financial coverage for pharmaceuticals for these patients. Many HIV patients did not start receiving antivirals or prophylactic medications until they enrolled in the Title IIIb and Title II programs. Almost all of the uninsured HIV infected persons were enrolled in supplementary pharmaceutical assistance programs funded through Ryan White Title II and state dollars (often called ADAP). However, it should be noted that most patients were not on protease inhibitors or receiving viral load testing at the HIV-Early Intervention programs, although some received these therapies through clinical trials. A major concern evident in the charts, and expressed by the staff, was the $1 ,000/month cost of protease inhibitors. At the time of this study, Arizona was one of the few states covering these drug therapies. New

York began paying for these drugs on July 1, 1996. Charts also confirmed that most homeless HIV infected were able to procure housing and shelter through HOPWA funds.

2. ***Issues in Service Coordination***

The chart reviews also surfaced significant issues affecting care coordination and integration.

Coordinating Care for the Homeless. For a variety of reasons, integrating services for the homeless is a difficult and knotty problem. While agency personnel assessed and referred patients for necessary care, many appeared to be going untreated for mental illness, substance abuse and dental problems. This may partly reflect the problems associated with providing coordinated services for a transient population -- e.g., no-show rates; difficulties in fmding patients for follow-up -- but it also reflects the limited community-wide resources for behavioral health services, particularly for an uninsured population. Charts also revealed significant physical health problems, particularly chronic diabetes, hypertension, cardiovascular and peripheral vascular diseases. Chronic conditions affected both adults and children, with the latter also showing evidence of domestic and community violence.

The homeless population is in actuality a variety of different groups. Coordination of care and documentation in records appeared better for women and children who tended to stay in shelters rather than on the streets, making follow-up easier. The following scenarios give a sampling of the complex cases seen in homeless programs.

> Allen[2] is a 39 year-old homeless male, currently receiving general assistance and applying for SSI. He is being treated for diabetes mellitus, angina and peripheral neuropathy . He is TB positive and received therapy (INH) during 1994.

> Fernando is a 9 year-old uninsured boy residing at a shelter. He has possible ADHD and is on ritalin. He had an episode of apnea at two months of age. He has had a double herniorrhaphy, esophageal surgery and bacteremia. At seven years of age he was shot in the head with a BB gun.

Insurance Coverage. Except for pregnant women, most of these patients were uninsured, including 3 of the five children and 16 of the 18 males. Of the 34 women whose charts were reviewed, 24 were pregnant; all but one were either receiving or applying for Medicaid. However, 9 of these 24 women were applying for Medicaid at the time of the reviews and were

[2]All names for cases described here are fictitious.

therefore presumably uninsured at the time of their entry into prenatal care. Most enrolled in Medicaid under presumptive eligibility rules, emergency Medicaid, or expanded eligibility for pregnant women -- and may, therefore, lose coverage after 90 days postpartum. All except one entered prenatal care during the first trimester.

Many of the homeless appeared to be too transient to qualify for state-supported indigent pharmaceutical payment programs, and charts suggested that the HCH grant was often the primary payment mechanism for ***medications.*** The programs also provided significant screening and, in collaboration with health departments, direct observed treatment in the field for tuberculosis. However, the only group of homeless persons who appeared to be receiving a wide array of medical and enabling services were young women and their children.

> Juanita is a 37 year-old established patient. Though uninsured prior to pregnancy, she is now enrolled in Medicaid. She enrolled in CPCP during her first trimester, has one perinatal case manager and is followed by the perinatal medical team. Her first case assessment and plan was on 11/95. Her most recent assessment was on 3/96. Coordination of care is well documented including all referrals and follow up. Prenatal labs were within normal limits, except for an abnormal PAP smear revealing human papilloma virus. Colposcopy was conducted for venereal warts. She'has received all the enhanced and enabling services. Case management notes reveal that Juanita may soon become homeless.

HIV and ***Pregnant Women. The*** sample included six HIV-positive pregnant women, four of ***whom knew they were HIV positive before they became pregnant and either chose to become pregnant or had contraceptive failure. All*** were receiving AZT prenatally. These women were co-managed by the hospital perinatal team and agency case managers. Charts revealed excellent compliance and provision of enabling services through the case management team approach. Charts showed that these women returned for postpartum care, although the majority of their needs were not clinical.

All pregnant women were offered HIV testing and pre-post test counseling. Most voluntarily agreed to the test, although some initially refused. For these "refusers, " multiple approaches and counseling sessions were required before they agreed to HIV-testing. These results, while admittedly for a small group, suggest that achieving BPHC's objectives regarding perinatal HIV testing -- not to mention meeting the requirements in the new Ryan White legislation that 95 % of pregnant women with at least 2 prenatal visits be tested -- will require extensive effort on the part of agencies.

Martha is a 32 year-old who has been diagnosed HIV-positive since 12/94; her partner succumbed to AIDS. She has a case manager from the HIV program who assists her with housing, SSI eligibility, food and clothing. Her pregnancy was diagnosed in March, 1995 and she was referred to a hospital-based program during her first trimester of pregnancy. She was considered high risk secondary to HIV and was diagnosed with carcinoma in situ of the cervix. She received AZT prenatally and delivered in November, 1995. Her baby was placed on AZT.

Culture. Charts revealed that a significant number of patients were new immigrants and monolingual; forms patients completed were filled out in Spanish. From the written records, our chart reviewer concluded that most of the agencies did an excellent job both in translating but also reformatting questions in the appropriate cultural context for the patients. Use of designated interpreters, bilingual staff and referral to community-based specialists appeared to enhance compliance. The charts also indicated that many born outside the US were uninsured and had significant medical problems.

Serafina is 15 years old, born in the Yucatan Peninsula of Mexico. She is uninsured and receives care at a homeless shelter, through an on-site nurse practitioner and community health outreach worker. She has been screened for TB(-) and her immunizations are up to date. The nurse practitioner arranged for her treatment of calcium oxalate stones (nephrolithiasis) at a referral hospital. She has also been treated for parasites, familial short stature, screened for pregnancy and family planning services.

3. ***Using Medical and Case Management Charts to Document Integration of Services***

Reviewing charts for evidence of service integration is far more labor intensive than reviews that document quality of clinical care. A "service integration review" requires use of case management notes, as well as the medical record -- and the case management records tends to be kept separately and is quite voluminous. While comprehensive "service integration reviews" would likely be prohibitively expensive, key elements that seem to promote service coordination could be documented. These include:

- ***Combining case management and clinical records in chronological order.*** Alternatively, if case management records are separate from medical charts,

abbreviated case management notes in the body of the medical charts appear to enhance the comprehensiveness of care.

- ***Use and completion of flow sheets, problem and medication lists*** appears to assist with screening for preventive measures. Since many patients obtain prescriptions outside the clinic walls, medication lists can assist in preventing adverse drug interactions. Brief review of clinical and psychosocial problem lists may enhance ability to deliver care.

- ***Documentation of tracking and follow-up of referrals,*** both in the medical chart and in the case management notes appears to enhance close loop referrals.

- ***Sharing records,*** particularly if a patient is co-managed, appears to decrease missed opportunities and occasional duplication of tests -- and provides a broader picture of patient needs. (e.g., where co-managed HIV patients are also enrolled in clinical trials .)

- ***Documentation of "address " on each and every visit,*** particularly for homeless patients and those at risk of homelessness, appears to enhance ability to follow-up.

VI. INFORMATION FOR SERVICE INTEGRATION: FROM INTAKE TO MANAGEMENT INFORMATION SYSTEMS

Patient record and MIS systems are closely related to the manner in which initial intake and assessment information were collected and organized. Some agencies used a site-based approach, in which separate intakes and assessments occur at each distinct clinic, while others had an agency-based approach, with a single intake and unique patient identtjier. While agency-based systems superficially appear to offer greater potential for integration, site-based systems which are tied together with staff and case management networks can be just as effective at coordinating services for individual patients.

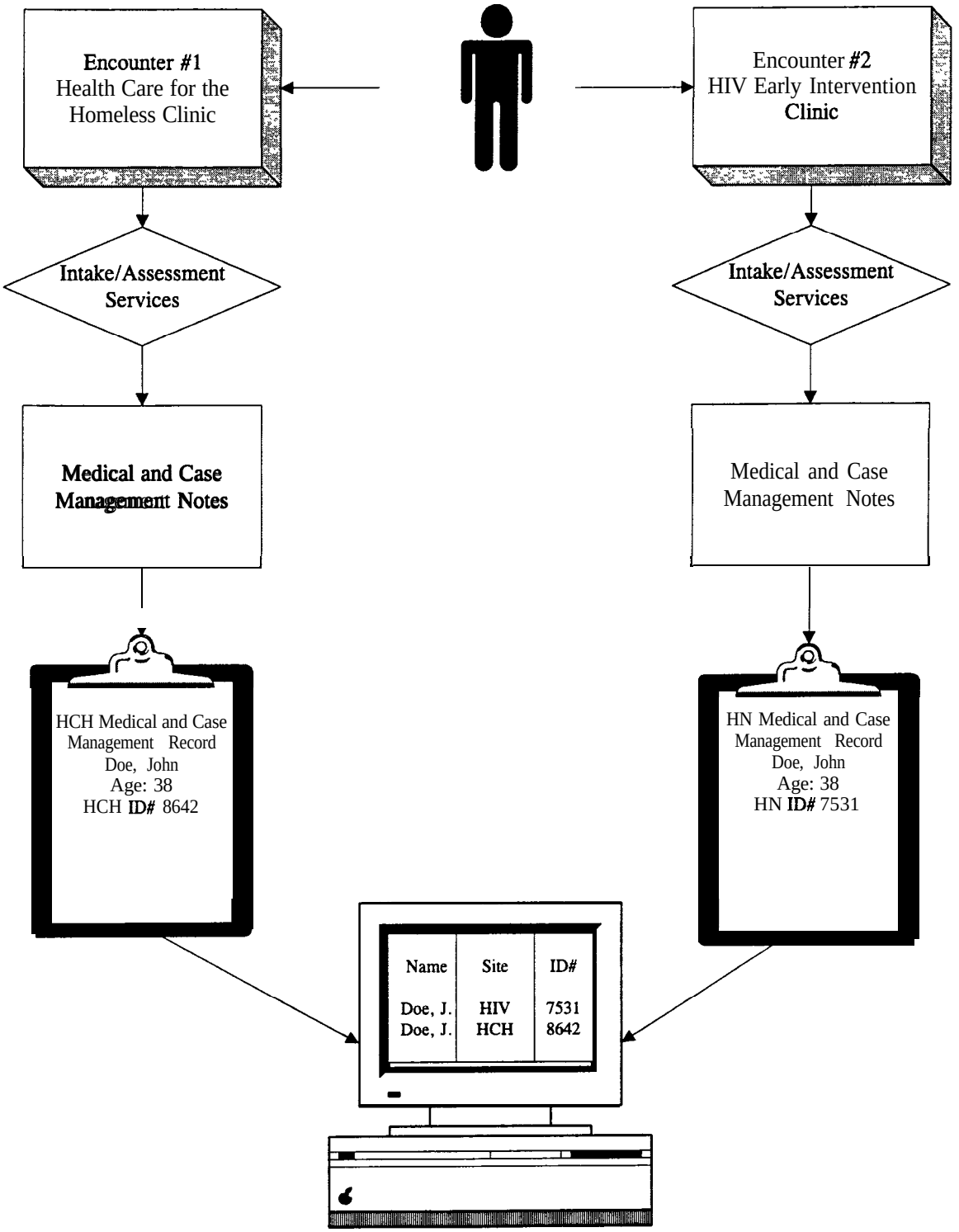
Upon entry into care, every patient moves through a process of registration and intake, assessment and referral. This process is essential for comprehensive clinical care, assuring that each patient receives the appropriate complement of medical and social services. It also yields the raw data on individual patient characteristics and services that are used to coordinate clinical care for individual patients, produce internal management and program planning reports and complete required reports to funding agencies.

Exchange of information is the life-blood of a coordinated care system, because clinicians and case managers need ready access to information from patient assessments and histories. This is particularly true for multi-risk patients who use services of different programs within a single agency -- and often require extensive referrals to outside providers. ***At these agencies, the structure of patient records and Management Information Systems (MIS) -- and the extent to which these systems could be used to support service integration objectives -- was intimately related to the manner in which initial intake and assessment information was collected and organized.*** Two distinct patterns were observed:

- A ***site-based approach, in*** which separate intakes and assessments occur at each distinct clinic a patient visits. Clinics maintain their own charts, often with clinic-specific patient identifiers (Exhibit VI. 1). When the encounters are posted in the agency MIS from two clinics with clinic specific identifiers, the system generally counts a single individual twice. Among these agencies, site-based approaches were seen at Clinica Sierra Vista, Centro del Barrio and Maricopa County.

- Under an ***agency-based approach,*** patients go through a single intake process, which includes assigning a unique patient identifier used at all sites where the patient receives care. In most cases, charts are stored at one location, but patient information is accessible to all sites, either from an on-line MIS and/or copies of charts maintained at outlying sites. While new assessments occur when a patient's risk changes, earlier assessment information is always readily available to the

Exhibit VI.1 Site-Based Intake and Information System



practitioner. Agency-based approaches were observed at William F. Ryan, Great Brook Valley and Multnomah County. (Exhibit VI.2)

This chapter first explores the process of collecting, organizing and retrieving patient information under these two approaches. It then discusses (1) the factors that contribute to selecting one approach over another and (2) the strengths, weaknesses and implications of the site-based and agency-wide approaches.

A. Components of the Information Process

1. *Intake, **Registration** and Assessment*

All patients complete an intake/registration process when they first appear for care. These procedures are relatively straightforward, covering basic identifying and demographic information (e.g., name, address, insurance, family members). Intake procedures also include information on income and family size required to determine sliding fee payments, particularly for uninsured/self-pay patients, and to screen for potential eligibility under other programs (e.g., young children who may be eligible for Medicaid; a substance abuser who might be eligible for services under a Linkage grant). Among these agencies, intake also served as an opportunity for initial screening for potential risks. Some questions on the intake form (e.g., ***"Are*** you living with others (e.g., at risk of becoming homeless)?" or "When was your least menstrual period? ") help staff direct new patients to the most appropriate care provider.

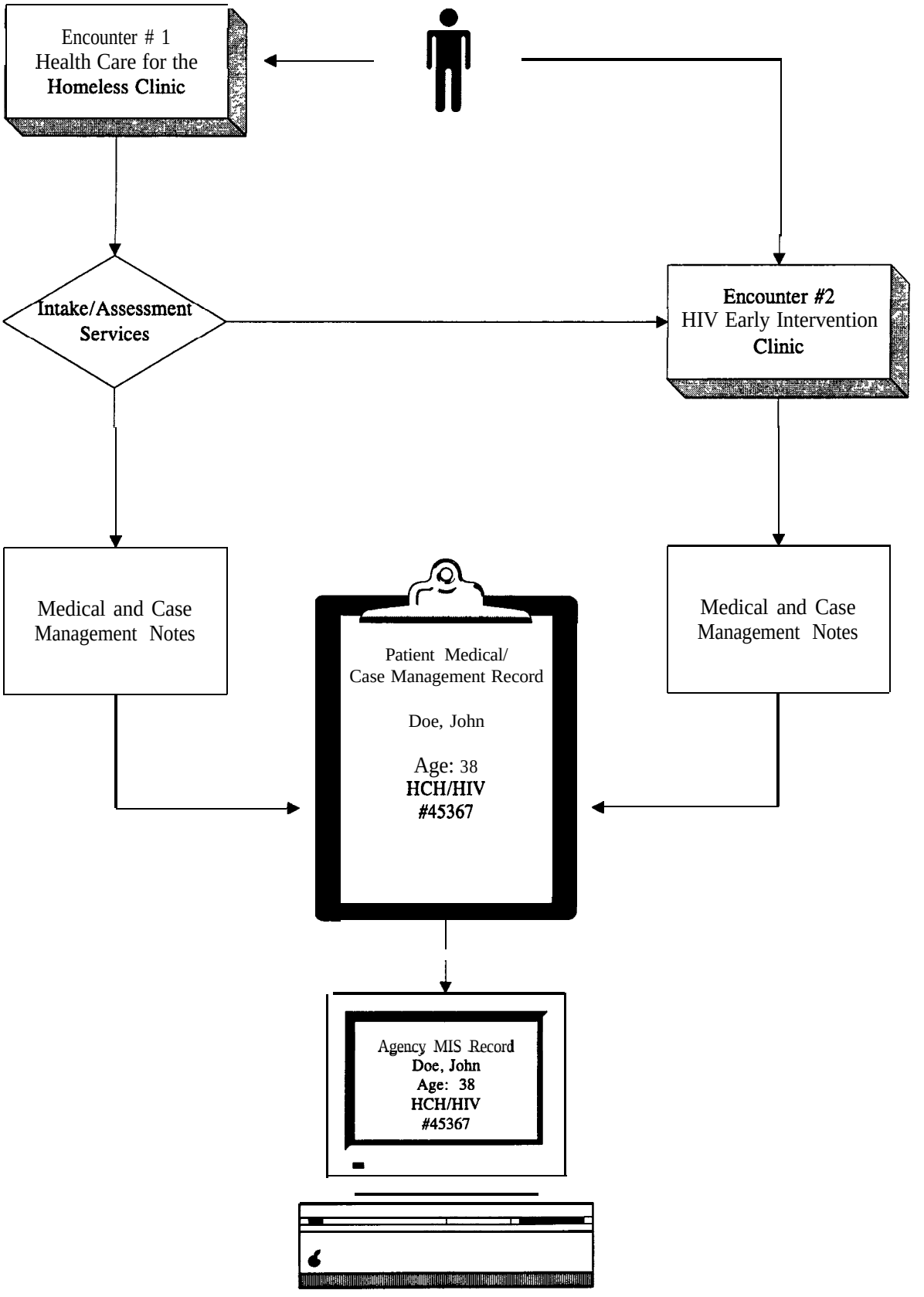
Distinctions between the agency and site approaches start at the registration desk.

- The ***agency-based approach*** involves a single, one-time registration process. William F. Ryan, Multnomah County, and Great Brook Valley assign patients a unique identifier after their first contact at one of the clinics. William F. Ryan provides patients with a card, with their identifier, that can be presented at any Ryan site (e.g., primary care shelter) to show that the patient is already registered with the center.

- Under the ***site-based approach,*** patients complete a new intake/registration process at each clinic visited. Clinica Sierra Vista, Centro del Barrio and Maricopa County register clients at each site they use and assign patient numbers that identify both the individual and the site. For example, at Centro del Barrio a homeless patient who uses the central dental clinic will have two intakes and patient identifiers -- one for each clinic site.

Multi-risk clients can be appropriately subject to multiple assessments, according to their individual risk profiles and changing health status. For example, a pregnant, homeless, substance

Exhibit VI.2 Agency-Based Intake and Information System



abusing, client would likely have numerous separate assessments perhaps administered by different providers of medical and social services. These assessments might include:

- perinatal psychosocial and medical assessment administered through the perinatal program using ACOG, Hollister or similar formats;
- eligibility assessments administered by on-site eligibility workers;
- in-depth mental health and substance abuse assessment, administered by a substance abuse provider to whom the woman was referred;
- housing and employment assessment, administered by staff at a homeless shelter where she is living.

There is, virtually by definition, some potential for redundancy in site-based systems (e.g., the same intake questions may be asked at each site a patient visits). For complex patients, multiple in-depth medical assessments are likely inevitable, but there is potential for redundancy, when prior information is not available to the site. For example, at Clinica Sierra Vista (CSV), a pregnant teen may first have an assessment at the principal perinatal program. If she is found to be eligible for the CAL-Learn program (because she receives AFDC and is in school), she will have a second intake/assessment when referred to that program.'

2. *Patient Charts*

Organizing patient records poses complex tradeoffs. On the one hand, practitioners require (and want) ready access to individual patient charts -- a consideration that argues for keeping all chart information at the site a patient most frequently uses. On the other hand, effective service integration across sites argues for assuring that every practitioner can easily locate information on any patient, regardless of where that patient generally seeks care.

Methods of organizing patient records build off the intake and assessment process used by the agency.

- An agency-based approach is illustrated by William F. Ryan Center in Manhattan. At this center, each patient record includes both the medical and social service chart. All records are maintained at the central site. Staff at off-site clinics (e.g., homeless shelters; the mobile SHOUT van) send the original chart information to the central medical records department, and keep a copy at their location. Copies are destroyed when patients are no longer enrolled.

[1] At the time of the site visit, CSV did not have a single release permitting sharing records among all programs.

- Under the ***site-based*** approach, each site maintains its own patient records. At Clinica Sierra Vista, for instance, a homeless and HIV-positive patient may have charts at both sites. When patients are referred from one site to another, relevant patient information will be faxed and/or conveyed in telephone conversations between practitioners.

For multi-risk patients, a complete patient record includes comprehensive medical and case management information, reflecting services received from, and assessments prepared by, different personnel. Regardless of the basic organization of patient records, there are two additional sources of potential discontinuity:

- ***Case management and medical charts.*** While many of these agencies included summaries of case management charts with the medical records, only one (William F. Ryan) consistently combined the complete case management and medical charts in a single patient record. In the albeit small chart review (see Chapter V), about 70 percent of cases had separate case management and medical charts. In some instances, separate charts have evolved out of funding patterns (e.g., where the case management program is supported and operated by a separate agency). In other cases, case managers operate out of a physical location separate from the medical program (e.g., a school, outreach center) and naturally want quick access to their charts.

- HIV ***Test Results.*** Protecting patient confidentiality is a critical issue to all agencies. Agencies that maintain this information in their central records go to great lengths to limit access to individual patient test results. William F. Ryan, for instance, encodes the information in their computer system and only the highest-level operator has access. Centro del Barrio keeps test results in the medical record, but stamps it "confidential" and does not permit copying these results.

In California and Arizona, state statutes regarding confidentiality of HIV-testing have precluded incorporating this information in general patient records. As a result, Maricopa County's McDowell Clinic is prohibited from sharing chart information, unless the patient has signed a specific release.[2] Clinica Sierra Vista maintains HIV-test results in separate records, accessible only to the case manager(s) responsible for pre- and post-test counseling.

[2]No chart reviews were conducted in Maricopa County, partly because of the statutes regarding confidentiality and partly because of requirements for formal Institutional Review Board consideration of research projects.

3. Management Information Systems

In all instances, patient information, generated through intake or from patient encounters, ultimately arrives at a computerized Management Information System. These systems serve two functions: (1) maintaining basic patient registration and demographic information and (2) managing billing and accounts receivable. Since the ***site-based*** approaches use separate patient identifiers, their ability to link patient information across sites -- and enable practitioners at one site to obtain information on patients seen elsewhere -- was, obviously, limited. ***Agency-based*** approaches were more likely to culminate in MIS systems that linked patients across special populations programs and were able to "unduplicate" users. Even among agency-based systems, computerized clinical information was limited -- and the MIS was most frequently used to identify previously-registered patients and locate information on that individual.

- William F. Ryan's MIS permits development of unduplicated reports on patients with particular characteristics (e. , pregnant, HIV). The system can be programmed to produce cross-tabulations that identify the prevalence of patients with a particular mix of characteristics.

- Both Multnomah County and Great Brook Valley use the MIS system for appointment scheduling, patient monitoring and long-range planning. Great Brook Valley has drawn upon the diagnostic and encounter data to develop profiles of their patients, in an effort to identify emergent health problems and plan accordingly. Multnomah County's system can track immunization histories of patients and link these data to the state's immunization database. Three years worth of patient laboratory and diagnostic histories can be retrieved through the system. Both of these agencies have begun to explore refinements to permit monitoring quality of care and patient outcomes.

B. Considerations in Organizing Patient Information

Among these agencies, approaches to intake procedures, records and patient information appear to have evolved over time, and new systems (e.g., a newly-developed computer system) have been grafted onto older processes. A retrospective view points to several interrelated factors contributing to the current patterns of information flow.

- ***Accessibility for practitioners.*** All agencies felt that practitioner access to their own charts was critical, and all agencies transferred necessary information among sites via fax, telephone or even (if immediately required) by hand. The agencies using a site-based approach often cited this factor as a driving force underlying their systems.

- ***Prior history and current environment.*** All of these agencies have been in operation for some years, and their approaches to intake and records predate the "computer revolution". Changing a system (e.g., from site-specific to unique patient identifiers) is always more difficult than grafting new technology onto the existing structure. It is interesting that staff at William F. Ryan attribute evolution of their system to a former Executive Director who was trained in medical records. Multnomah County's MIS, which operates in conjunction with Oregon Health Sciences University, was implemented at the time the state initiated Medicaid managed care.

- ***Confidentiality requirements.*** The statutory provisions regarding confidentiality of HIV information in California and Arizona are one example of external constraints on an agency's ability to exchange information on patients with HIV. While all agencies went to great lengths to protect confidentiality in their systems, some did include HIV test results in their medical records. The legal provisions in these two states (and perhaps others not visited during this project) are particularly constraining on medical personnel. California law prohibits "posting" results of a HIV test in a medical chart, while Arizona law requires any person wishing to review the records of any HIV positive person to go through a complex review process.

- ***Reporting and regulatory requirements.*** All agencies are expected to submit regular reports on users and services to BPHC and other funding agencies. Some of these reports can be generated from existing MIS systems while others cannot. In the latter instance, some agencies appear to find the time and expense associated with setting up a special purpose reporting system (e.g., a single database file on a PC) less onerous than changing their MIS. Agencies with site-based systems felt they were better able to comply with reporting and regulatory requirements by having distinct identifiers and records at each site. In two instances, staff indicated that funding rules from BPHC and/or the state, required specific documentation (e.g., through patient registration and charts) in order to count a patient as a program user. [3]

It is fair to say that, among these agencies, each preferred the approach currently in use, citing specific strengths as their rationale. Thus, agencies with ***site-based*** systems highlighted ease of access for practitioners and cited extensive formal and informal staff communications as the critical mechanisms of information exchange. These agencies also found their systems highly efficient for reporting purposes, because reports on the program could be produced with little

[3] As we understand BPHC rules and definitions for the Uniform Data System, a patient has to receive a service which is documented in order to be counted as a user. The definitions do not say that the "chart" must be at a particular location, or that the patient's registration must be specific to the program.

special (or expensive) programming. Those with ***agency-based*** systems felt that access to more comprehensive data enabled them to manage individual care better and assure that patients did not "fall through the cracks. " Some saw potential for monitoring outcomes through use of their MIS -- and felt that the comprehensive data available through these systems would assist in planning and managing patients under managed care.

To an external analyst, agency-based systems appear on the surface to have more potential for integrating services for complex patients, and provide a vehicle for facilitating transitions when staff change. Site-based systems have greater potential for patient care discontinuity -- and may increase burden on patients through multiple intakes and assessments. These apparent differences do not, however, always translate into practice. Experience with these agencies showed that ***site-based systems which are tied together with staff and case management networks can be just as effective at coordinating services for individual patients.***

The greatest argument against converting site-based approaches to agency-based systems is the cost of change. Such a conversion requires (1) reassigning all patient identifiers; (2) developing and implementing new patient intake practices; (3) retraining staff; and (4) technological computer costs. In today's fiscally constrained environment, expenditures to change these systems take low priority -- on the grounds that "if it ain't broke, don't fur it".

Rather than develop new systems, agencies and BPHC might explore more effective ways of linking patient information with the basic programming and resources now used by agencies. In particular, some of the site-based systems include data elements which, with appropriate programming, would permit linking patient information across sites. For example:

- All systems include information on (1) name; (2) birthdate; (3) social security number. Researchers have tested algorithms for linking national databases using these three variables. Site-based systems might be programmed with similar algorithms to permit searches for patient information across sites.

- For the insured, all systems include an insurance identifier (e.g., Medicaid number) that should be standard across site. Programs could be written to search databases for multiple patient records with the single Medicaid identifier, thereby enabling practitioners at one site to learn if the patient has been elsewhere. However, if a state's practice is to change Medicaid numbers over time as patients go on and off Medicaid, this approach will not allow retrieval of historical records.

VII. MECHANISMS FOR COMMUNICATION AND SERVICE INTEGRATION

Case management is the linchpin for assuring coordinated and integrated services for individual patients. In linear organizations-- with only site-based MIS-- case management is the critical "glue" that holds the system together. Agencies also use multi-disciplinary teams, cross-training, internal referrals and rotation of personnel to extend staff capability to address complex problems of multi-risk patients. Formal and informal arrangements with numerous community organizations expand the scope of services available to patients.

While the study agencies exhibited different service delivery configurations, all adapted and adjusted their programs to focus on individual patients and their unique clinical requirements. The emphasis and relative importance of different communication methods in achieving these objectives varies, depending in large part on the underlying infrastructure for information exchange. ***Where patient information and MIS systems are site-based, agencies rely more heavily on personal and informal networks for communication.*** This section explores the three primary approaches -- case management, staffing and training, and referral patterns for specialty services.

A. Case Management

In all instances, case management plays a key role in assuring integration of services for individual patients. However, in "linear" programs -- and those with site-based information systems -- effective case management is an essential prerequisite to assuring service integration in the programs. In these organizational models, where multiple clinics provide services and the ability of the MIS systems to exchange information is limited, case management is the essential "glue" that binds the system together.

Maricopa County provides only one example of the essential role of case management as a vehicle for information. In Maricopa, the HIV clinic is structured as one of 15 primary care clinics operated by Maricopa County Health System; the Health Care for the Homeless program is operated by a separate part of county government, the Department of Public Health. The system for special populations is a set of distinct targeted programs, tied together through two elements:

- AHCCCS ***and ALTCS*** [1]: Under Arizona's "Medicaid Managed Care Program, " all eligible patients are enrolled in either the acute (AHCCCS) or long-term care

[1] AHCCS-Arizona Health Care Cost Containment System; ALTCS-Arizona Long-Term Care System.

(ALTCS) program. Since AHCCCS has been in operation since 1982, it is not surprising that Maricopa County programs are familiar with -- and aggressively pursue -- AHCCCS/ALTCS eligibility for their patients.

- ***Case management:*** The programs operate as rather discrete entities serving defined populations; and case managers are responsible for integrating services across the programs for individual patients. Case managers from the HIV and HCH programs work closely together, with the latter frequently referring patients to the HIV programs as more specialized care is required. The Primary Care/Substance Abuse Linkage Program, a case management program for substance abusers, including those at risk of HIV, is particularly important to these coordination efforts. Case managers from the Linkage Program work with both HIV and HCH agencies; bi-weekly case conferences at different treatment sites foster collaboration and care coordination.

1. *Staffing for Case Management*

Depending upon patient circumstances and program decisions, case management may be provided by medical personnel or by case managers whose primary training and job descriptions include a combination of counseling, outreach, and patient advocacy.

- ***Designated case management staff.*** All six agencies had case managers dedicated to their perinatal, HIV and homeless programs. The mix of personnel includes social workers (e.g., Great Brook Valley, Centro del Barrio); obstetrical nurse-practitioners or community health nurses (e.g., William F. Ryan, Multnomah County); and community health workers with combined outreach-case management responsibilities (e . g . , Clinica Sierra Vista).

- *Clinical personnel.* ***While*** all agencies had designated case management personnel, clinical staff also act as case managers particularly regarding medical issues. The particular type of staff involved (e.g., physician, nurse-practitioner/physician assistant and/or nurse) varies among programs and according to patient needs. For example, at two agencies (Centro del Barrio and William F. Ryan), nurses provided clinical case management for perinatal patients -- but physicians were responsible for case managing the medical component of HIV patient care. Even for agencies like Ryan and GBV that emphasize a primary care approach to all conditions rather than departmentalization by condition (e.g., HIV care is not separate), clients will have categorical case managers dedicated to specific programs. Most agencies used a team approach, combining the skills of clinicians and non-medical case managers to maximize ability to manage patient care. Although specific data were not available for all programs, HIV case managers appeared to have the lowest caseloads, while case managers in the HCH programs had the highest.

2. Prevalence of Multiple Case Managers

While case management is, by definition, a service integration function, a multi-risk patient may have more than one case manager for different aspects of his/her care. The chart reviews showed that eight of the 52 patients had more than one case manager. All of these patients were diagnosed HIV-positive, and four of the eight were also pregnant. Several agencies indicated that, for complex patients, assigning more than one case manager was often the most effective way to assure availability of the different (and specialized) skills required to address each of the risk conditions.

Each patient was assigned a "primary" case manager with lead responsibility, who then drew upon assistance from case managers in other programs. For example:

- For a homeless, HIV patient at Centro del Barrio, the case manager from the homeless program, who is located at the shelter, may have lead responsibility for ongoing patient follow-up and social service referrals. The HIV case manager will monitor medical treatment and assist in assuring that the patient receives HIV counseling.

- A pregnant, HIV positive patient at William F. Ryan would also have two case managers. Because Ryan provides HIV-related services within its general primary care programs, medical treatment would be case managed by perinatal personnel. In both instances, an HIV case manager/social worker would also work with the patient, to assure access to appropriate counseling and other supportive services. For instance, a positive HIV test immediately triggers an appointment with an HIV case manager, who provides post-test counseling and introduces the range of options available to the patient for treatment and counseling services.

- At GBV an HIV positive client could have two HIV case managers, a nurse case manger for clinical needs and a social work case manger for counseling and other services.

Finally, depending upon patient needs, and the manner in which services are organized in the community, a patient may also receive case management services from a separate organization in the community. For example:

- Clinica Sierra Vista operates HIV services under their Title IIIb grant. As the disease progresses -- and more intensive services, especially for end-of-life care, are required -- patients will be referred to a county-run nursing case management program, but maintain the relationship in the CSV at the same time.

- Transferring a pregnant, HIV-positive patient to a hospital or university-based high risk program does not mean that the perinatal case manager ceases contact with me

patient. All agencies with perinatal programs report that case managers follow the patient through delivery, to assure that she returns to care for herself and her child.

B. Communication Techniques

All agencies rely on a combination of formal and informal networks among staff to maintain ongoing communication. These techniques, which supplement patient records and MIS systems, build bridges among programs, reduce discontinuities in patient care, and span the array of potential devices --from handwritten faxed notes to on-line computer linkages.

- *Case conferencing* often crosses programmatic lines, to address needs of particularly complex patients. For instance, Multnomah County HIV and HCH staff hold joint bimonthly meetings, and the clinical and case management staff from the two programs have site-specific weekly case conferences. Great Brook Valley has an internal "task force" in which case mangers from all programs participate. The objective is to assure channels for ongoing coordination and service integration across categorical and departmental lines.

- *Staff sharing* is another approach used both to maximize available personnel and assure service integration. Most of the sites rotate medical personnel, particularly physicians, among their clinics. Some also share staff with another agency (e.g., a homeless program medical director may also serve as a medical consultant to a substance abuse center). Centro del Barrio has extended staff sharing to mid-level personnel who work at the homeless shelters or HIV clinic and rotate through the core primary care site at least one day a week. This regular rotation schedule facilitates client referrals and improves their comfort level during a first visit. An individual at the homeless program can make a referral to the main site, saying "come on Tuesday, when I'll be there."

- *Cross-training* is a third technique for promoting service integration. Agencies use in-service programs for staff as an opportunity to bring together personnel from outlying sites and educate each other on specific program issues and problems. For example, CSV holds regular monthly inservice meetings of all personnel. Centro del Barrio has sent patient care staff from all sites for training and certification in HIV pre and post test counseling.

- *Informal communications,* from "water cooler conversations" to faxed messages are the essentials that keep every system operating. In discussing communication methods, agency personnel eventually point to the fact that "we all talk to each other." Relationships established through professional networks are equally important, particularly for facilitating referrals with outside organizations. One example is the informal collaboration (see below) between a case manager at

Centro del Barrio and an employee at the hospital, which resulted in an "abbreviated" intake system for CDB's homeless patients who are referred to the hospital specialty clinics.

- ***Automated systems*** offer access to information across multiple sites. While most of these agencies have multi-site computer networks with some limited information, they did not have E-mail or other methods of easy inter-site communication. At Multnomah County, all sites access the same registration module on the MIS systems. Both Multnomah and Centro del Barrio have on-line links to back-up hospitals to speed receipt of laboratory test results.

- ***Referral*** *protocols* can be used to monitor internal referrals, (e.g., from the homeless clinic to a central primary care site with, specialized services), but follow-up on internal referrals is often informal and occurs through "hallway conversations. " Since results of internal referrals are eventually entered in patient records, the extent to which formalized systems are essential may depend on the size of the system. For example, Clinica Sierra Vista, the agency covering the largest geographic area, is now working on an inter-site referral form that would allow a client to have records shared across its 10 site, multi-county system. Great Brook Valley enters all referrals into its computer system on the day the referral is made, a process that expedites tracking and monitoring.

C. External Referrals

Follow-up on external referrals is complex. The agencies have, and continue to develop, formalized procedures for tracking referrals (e.g., for non-maternity admissions or to community agencies for substance abuse services). All note that the formal processes, while desirable, are not the only (or even the principal) method of information transfer. For instance,

- Multnomah County has developed a comprehensive set of very specific referral procedures. Despite the implementation of this system, staff note that most feedback on referrals comes from informal communications, not through the formal system.

- Centro del Barrio stresses coordination with other state and city agencies and, for homeless services, uses an inter-agency referral form designed by a commission for coordinating care. At the same time, the homeless program relies heavily on its informal networks to expedite care for patients. For instance, standard hospital protocols require that a patient go first to the primary care clinic before seeing a specialist even when the patient has been previously evaluated at another location. Informal relationships between the homeless program and outpatient department staff have enabled homeless patients to bypass the initial primary care clinic,

thereby reducing waiting time and repetition when they are referred for specialty care

Follow-up on external referrals depends upon *communication from* ***other providers.*** Some agencies invest heavily in time and staff resources to track individual patient referrals; others rely on feedback, either from the referral provider or from the patient. Agencies pointed to some difficulties in obtaining feedback. For instance, Clinica Sierra Vista noted that formal relationships with the county hospital for OB care are good, but the pediatrics staff is less likely to report back to CSV on referrals. Although agencies expressed concern about the referral issue, the limited number of chart reviews conducted for this project showed substantial follow-up information on referrals (e.g., both referral and results noted in the patient's chart).

Some of the agencies have become involved in community networks that help to foster interagency communication -- and ultimately improve external referrals. Centro del Barrio has been active in promoting development of inter-agency coalitions that sponsor service delivery programs as well as providing a forum for coordinating care. In Multnomah County, the HIV, homeless and linkage program staff participate in city-wide networks where staff from multiple organizations collaborate on treatment planning for patients. In Maricopa County, the homeless site works closely with the VA hospital and the area shelter system to coordinate care and avoid duplication of vital services.

Arrangements for delivery of prenatal patients poses a particular issue. While all five agencies with perinatal programs have OB/GYNs or family practitioners with hospital admitting privileges, all perinatal patients are not necessarily delivered by agency staff.

- At Clinica Sierra Vista, patients using the county hospital are generally delivered by the hospital physicians. A patient's records go to the hospital during her last month of pregnancy, to assure that complete information is available at time of delivery. CSV noted that the size of their perinatal caseload (3500 patients) made it virtually prohibitive for their limited OB/GYN staff to do all deliveries.

- At Great Brook Valley, hospital residents deliver most of the patients. While some of the Great Brook Valley family practitioners have obstetrical privileges, limited numbers of physicians coupled with liability insurance costs have restricted their hospital practice. They hope to resume some deliveries as soon as these issues are resolved.

- For patients at Centro del Barrio, delivery varies, depending on insurance status. Medicaid patients are delivered at not-for-profit hospitals by the center physicians, but uninsured patients go to the University hospital, where they are delivered by hospital residents. The hospital has, apparently, insisted on this arrangement, perhaps to assure adequate numbers of deliveries for their residency program.

A virtual axiom of perinatal care is that the same personnel should provide both prenatal and delivery services. However, when hospitals insist on performing the deliveries and agencies do not have a sufficient number of physicians with admitting privileges, the agency may have little choice but to agree. William F. Ryan, for instance, was so committed to continuous OB care that they closed their perinatal program for a year, when their back-up hospital insisted that all patients would be delivered by hospital residents.[2] However, all these agencies did not operate in a community, like New York City, where transferring pregnant patients to other providers is probably more feasible.

D. Integrating Services for "Walk-In" Patients

While multi-risk patients suffer from multiple chronic conditions, they often tend to seek health care in an episodic fashion--a challenge for most of these agencies. Staff at the Linkage program in Maricopa County indicated that they try to provide as much care during the first patient visit as possible, since a high proportion of clients have poor follow-up. Other agencies noted the problems of episodic care-seeking among the homeless, particularly those who are not resident in shelters.

Great Brook Valley--where about 40 percent of patients use the center in an episodic manner-- is implementing a "triage" approach to walk-in care that is intended to convert these visits into comprehensive care. Called "office visit planning, " the system calls for (1) screening all clients, even those presenting with urgent conditions, for health problems and prevention measures that go beyond their chief complaint and (2) providing a variety of services on-site during that same visit. Implementation of this approach coincides with development of a "one stop shop" for health care, with on-site medical, pharmacy, and laboratory, dental, mental health, and acupuncture detoxification for substance abusers.

Office visit planning requires that staff familiarize themselves with the patient's history prior to the patient's meeting with the physician. Two bilingual RNs with graduate level training are responsible for triaging and prioritizing patients, reviewing the records of all incoming patients before the patient sees a physician. This review includes (1) the medical record; (2) updating the Problem List; (3) identifying unmet preventive and chronic care needs, including problems lost to follow-up and (4) constructing a visit plan, that notes the chief complaint prompting the visit, and flags the chart with reminders for the primary care provider.

The planning process enables the center to address clients' immediate needs, while using the episodic visit as an opportunity for preventive care. For example, a patient may come to the center for a bad cold. If the nurse notes she is overdue for a PAP smear, this procedure can be

[2] Because Ryan has a 20-year relationship with the hospital, they preferred to resolve the issue rather than seek another hospital arrangement for maternity care.

done on the same day rather than requiring a follow-up appointment. Similarly, a homeless man coming to the center in October might receive a flu shot, as well as treatment for his presenting condition. Staff at Great Brook Valley note that the triaging approach has improved levels of preventive services. PAP smear rates rose from 40% to 90% of the relevant population; adult immunization rates rose to 90%.

E. Summary

In all systems of care, case management is the linchpin assuring coordinated and integrated services for individual patients. Indeed, in linear organizations -- and those with a site-based management information system -- case management is the essential "glue" that holds the system together. The networks, both formal and informal, that staff and agencies build over time are equally critical to care management and linking patients with essential external resources.

Case management is, by definition, a service integration function and therefore, in theory, patients should have only one case manager. For patients with HIV-disease, this is not always the case. Some have multiple case managers, although one generally carries "lead" responsibility. A pregnant woman may have both a perinatal and HIV case manager; severely-ill patients may receive medical case management through a hospital-based program and social case management from the HIV-Early Intervention agency. Interestingly, these agencies did ***not*** attribute the presence of multiple case managers to any particular grant requirements. Rather, they found shared responsibility to be effective in maximizing availability of specialized skills -- and maintaining continuity with patients who were referred elsewhere for medical services.

Comprehensive follow-up on external referrals continues to pose some difficulties, even for agencies with highly formalized and integrated referral networks. Although the chart reviews showed a high degree of "closed-loop" referrals, agencies often cited difficulties in obtaining feedback, particularly for hospitalization information not related to maternity care. As more agencies enter managed care, effective referral and follow-up management will likely become even more critical, and agencies may have to rethink and restructure their current, sometimes informal, processes to assure more formalized and uniform tracking.

VIII. LOOKING TO THE **FUTURE:** MANAGED CARE AND MULTI-RISK PATIENTS

The advent of managed care brings with it a host of issues for BPHC-funded providers. Depending upon how these issues are addressed, managed care could enhance -- or impede -- service integration for multi-risk patients. Programs covering only AFDC populations have spill-over effects that eventually touch services to otherpopulation groups. Operating managed care for more high-risk populations (e.g., persons with HIV, homeless) raises significant rate-setting and patient enrollment issues.

When this study was initiated, managed care was not seen as central to an assessment of ***service integration issues. As*** research progressed, it became apparent that managed care, indeed, posed new challenges to agencies' abilities to integrate services for multi-risk patients. Furthermore, although managed care for special populations is still limited in scope, some of the six study agencies had been operating under managed care for some time. Their experiences are likely to be useful to other agencies who are grappling with the implications of this transition to new payment methods.

This chapter briefly profiles the experience of four study agencies who now provide services to multi-risk populations in a managed care environment. Drawing on those experiences, we then explore some of the potential service integration issues that may emerge over the next several years.

A. Experience with Medicaid Managed Care

Maricopa County and Multnomah County have the longest history of providing care to high-risk populations under managed care. At both William F. Ryan and Great Brook Valley, managed care enrollees have become an increasingly important component of their patient populations -- and new issues are emerging as their respective states begin mandatory Medicaid managed care programs.

Maricopa County has almost 15 years of managed care experience. Arizona has two distinct programs -- the Arizona Health Care Cost Containment System (AHCCCS) covering primarily acute care services and the Arizona Long Term Care System (ALTCS) for long term care. Since 1982, the Maricopa County Health Plan has served as the county's only publicly administered "Medicaid" HMO. The Maricopa Plan is now one of ten HMOs with Medicaid contracts competing in the Phoenix market. The Maricopa Plan's share of AHCCCS enrollees has been shrinking annually -- from a peak enrollment of more than 50,000 to 27,000 in 1995 as

more HMO plans have entered the Medicaid managed care market and have actively recruited Medicaid enrollees.

Not surprisingly, in light of Arizona's long managed care history, the HIV and homeless programs aggressively pursue enrollment in AHCCCS and ALTCS, and both have on-site eligibility determination to assist their patients. Nevertheless, AHCCCS/ALTCS revenue account for a small proportion of total program budgets. About 7 percent of homeless program revenue came from AHCCCS in 1995. While approximately one-third of patients seen at the McDowell Center (HIV program) are enrolled in AHCCCS or ALTCS, revenue from these plans accounted for only 8 percent of the total budget. The McDowell Center is taking the lead in developing plans for a managed care program targeted to persons with HIV disease.

Multnomah County Health Department is a managed care provider under Oregon's current 1115 Medicaid waiver program. In 1994, the Multnomah County Health Department, the Oregon Health Sciences University and the Oregon Primary Care Association developed CareOregon, a statewide health plan. CareOregon is the third largest Medicaid plan, following the Kaiser and Blue Cross/Blue Shield HMO plans. Most of the BPHC-supported 330 and 329 agencies participate in CareOregon. CareOregon currently enrolls over 22,000 Medicaid recipients, with about half enrolled with the Multnomah County Health Department.

As in Maricopa County, managed care revenue for the special population programs is quite low. Almost 20 percent of HIV program users are enrolled in Medicaid managed care; capitated revenue amounted to about $10,000 -- and total Medicaid revenue was slightly over $140,000. At the homeless program, about 17 percent of users were enrolled, capitated revenue was about $44,000 and total Medicaid amounted to $215,000.

While **William F. Ryan** has participated in voluntary Medicaid managed care since the late 1980's, mandatory programs (like Arizona AHCCCS and Oregon's waiver) are new to the center. In 1988, Ryan staff created CenterCare, an independent, Medicaid managed care plan. CenterCare is the only Medicaid plan with which Ryan contracts, and patients can enroll in CenterCare through the Ryan system. In 1993, Ryan helped to create a collaborative network, including the Ryan Center, an additional health center, and a major NYC hospital (St. Luke's/Roosevelt Hospital Center).

Although William F. Ryan serves about 7,600 managed care enrollees -- and receives almost $3 million in capitated Medicaid revenue -- managed care is a minor participant in the homeless and HIV programs. At each program, managed care accounted for fewer than 5 percent of users -- and about $10,000 - $14,000 in revenue. However, as New York implements mandatory Medicaid managed care, Ryan anticipates greater impact on their programs. New York wishes to include services for special populations (e.g., homeless, HIV and school-based programs) in their mandatory Medicaid program. The state is providing financial support for several local consortia to develop capitation rates for HIV patients; Ryan participates in a consortium with six hospitals and other community-based organizations providing HIV services.

Great Brook Valley Health Center (GBVHC) has participated in Medicaid managed care, since 1989, under a contract with the Neighborhood Health Plan (NHP). The NHP is a state-wide HMO, whose initial development was sponsored by the CHCs in Massachusetts. In 1994, GBVHC had approximately 2,300 Medicaid managed care enrollees (27% of their total users). Medicaid managed care enrollments have been declining, indicative of the increasingly competitive Medicaid market. Fallon Health System, the largest and well-established HMO in Central Massachusetts, continues to draw both privately insured and Medicaid enrollees, leaving GBVHC with fewer Medicaid enrollees and the growing residual, uninsured and minority (principally non-English speaking) population.

B. Challenges to Integrating Services under Managed Care

Although managed care is currently a minor contributor to financing services for multi-risk patients, mandatory Medicaid managed care is changing the marketplace and surfacing new challenges for service integration. Managed care programs covering only AFDC populations have spill-over effects to other population groups; programs that include more disabled groups (e.g., persons with HIV receiving SSI) raise significant rate-setting problems. While the full complement of challenges has yet to emerge, experience among these agencies highlights some of the likely issues for future consideration.

1. The "Spill-over" Effect

Since enactment of FQHC, BPHC-supported programs have become increasingly reliant on Medicaid, which today amounts to over one-third of total revenue, nationwide for C/MHCs and special population programs.[1] The advent of FQHC enabled agencies to maximize use of their grant revenue for uninsured patients and services. Many of the agencies in this study reported that direct revenue for the special population program was insufficient to cover total costs (e.g., administrative expenses), and Section 330 dollars were used to fill in the gaps, as necessary.

Regardless of whether state programs bring the special populations (e.g., HIV, homeless) under the mantle of managed care, ***the managed care revolution will affect an agency's ability to provide the full scope of services required by multi-riskpatients.*** This "spill-over" has three inter-related causes which, taken together, may force agencies to make difficult choices regarding the range and scope of services available for patients ***not*** enrolled in managed care.

- ***Market share.*** Some of the agencies, like Great Brook Valley, are losing market share. William F. Ryan is also concerned about retaining (if not expanding) its

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'Source: BCRR data for all CMHCs including those with special population grants. These data do not include **agencies that do not have a C/MHC grant, and therefore, levels of Medicaid revenue may be slightly understated.**

current patient loads. They note that, in New York City, private HMOs have launched TV advertising campaigns designed to attract Medicaid patients. Grant requirements, coupled with limited non-grant funds, constrain their ability to compete in the same arena (e.g., with ads on major TV stations).

- *Change in patient mix.* Competition from private plans can result in risk selection, with BPHC-supported providers seeing an increase in enrollment among higher risk patients. As noted, this has happened at Great Brook Valley; William F. Ryan is observing significant increases in uninsured patients sent to them by hospitals and other private providers -- a phenomenon putting increasing stress on their budget. Multnomah County believes that CareOregon experiences adverse selection and that their population is more acutely ill than those enrolled in other plans.

- *Capitafion rates.* While each state develops its own capitation methodology, agencies are clearly concerned that current methods establish rates that are insufficient to support current services -- and certainly well below FQHC rates. While the issues involved in setting capitation rates for the general primary care population are well beyond the scope of this project, one thing is clear. *If* rates are "too low," agencies would likely be unable to use other funds (e.g., Section 330) as "backup" support for their special population programs -- because these funds would be needed for services to Medicaid patients.

2. **Specific Issues Affecting Service Integration for Multi-risk Patients**

In addition to potential overall effects, managed care brings specific implications and concerns for multi-risk patients.

- *Setting capitation rates for high-risk populations.* Clearly, this is a concern for all agencies serving special populations. If special populations are "carved-in" to managed care -- and if payment rates do not adequately reflect severity and services required by HIV and homeless patients -- it will be difficult for agencies to continue to provide the range and scope of services now available. Record reviews for this project showed a population with significant physical and mental health problems, often requiring extended (and expensive) treatment. Under current competitive market scenarios, private providers may seek to minimize enrollment by multi-risk patients, a process that could leave the BPHC-supported programs with the more complex and costly patients. As discussed, three agencies (Ryan, Maricopa and Multnomah) are now involved in efforts to develop capitation rates for HIV patients -- efforts that may yield information on capitation rates and case mix useful to all BPHC agencies.

- ***Coordinating behavioral health services with capitated primary care.*** Special populations tend to require behavioral services, psychological counseling, and other mental health or substance abuse treatment services. In managed care, these services often are considered "carve-outs" and administered by designated Medicaid-approved providers. In Phoenix, for example, mental health and addiction services are available through a single managed care provider; Medicaid plans refer their enrollees to the behavioral services provider for screening and related behavioral services. Agencies may have to develop new referral networks, unless they compete for these "carve-out" contracts. In order to compete, they will have to demonstrate strengths and efficiencies attractive to the state agency.

- ***Financing enabling services.*** These agencies expended considerable energy and resources providing the counseling and enabling services essential to manage care for high-risk patients appropriately. As just one example, a number of pregnant women refused HIV testing on first contact, although they agreed to the test after continuous contact, education and counseling. Another example is the cost of direct observation with the homeless, to achieve compliance with tuberculosis medication regimen. In both instances, the amount, duration and scope of services covered under a managed care program may be below the level of effort required to provide effective, coordinated services.

- ***Enrolling special populations in managed care.*** Managed care is new to most Medicaid recipients, and confusion is likely, particularly during the early years. For high-risk populations, these problems are often compounded by language barriers, changes in residence/address, and administrative behaviors. For instance, several homeless families in Phoenix were assigned by the state to providers in Scottsdale (one of the nation's wealthiest communities far beyond the areas where the homeless congregate). These patients had not realized they were to return an enrollment in order to select their provider. In Massachusetts, assignments do not always account for language barriers and cultural preferences; Spanish-speaking families in Worcester were assigned to distant providers with no Spanish-speaking staff. While these problems can be corrected, they require sometimes lengthy efforts on the part of program staff.

- ***Co-payment or premium requirements.*** Some managed care plans charge co-payments for selected services; in some states, like Oregon's waiver program, additional eligibles may enroll by paying a premium. Under the Oregon Health Plan, failure to pay the premium leads to loss of coverage, and there is 45-day waiting period prior to re-enrolhnent. Multnomah County is considering whether to pay the premium on clients' behalf, since the program would eventually pay for uncovered care through county funds. Interestingly, patients indicated that they preferred a premium to a co-payment, because a monthly expenditure could be planned for more easily than an unexpected expenditure at time of illness.

- *Assuring continuity for the homeless.* Integrating services for the homeless can be particularly difficult, because of the transient nature of the population. In some instances, managed care could actually increase the difficulties. A managed care enrollee who becomes homeless may enter a shelter some distance from his/her usual plan. Shelter-based services may be provided by a BPHC agency which does not have a contract with the patient's specific managed care plan. Providing that patients in these circumstances can easily switch plans -- or that the BPHC agency can be paid for covered services -- will be necessary if these agencies are going to continue to operate homeless services in these accessible locations.

C. Summary

Like any revolution, the "managed care revolution" leads to new uncertainties -- and every BPHC funded agency is now learning to adapt and operate in this evolving environment. In theory, one would expect managed care to improve service integration -- but, in practice, this may not be the case. ***If*** multi-risk patients are enrolled in managed care plans, and if the current providers adapt well to the competitive marketplace, service integration may benefit. *If,* on the other hand, multi-risk patients are largely uninsured (as appeared to be the case among these agencies), and BPHC-funded agencies experience adverse selection, these agencies may have fewer resources to devote to the case management efforts essential to care coordination -- and service integration could ultimately suffer.

IX. CONCLUSIONS, ISSUES AND RECOMMENDATIONS

Agencies use different organizational approaches and techniques for combining dollars and resources in order to meet the care requirements of multi-risk patients. Some approaches may appear more "seamless", but in-depth assessment shows remarkable similarities at the level of individual patient care. Effective case management, and attention to the hierarchy of patient care needs, appear key to achieving individual patient service integration. While BPHC rules do not appear to impose substantial "barriers," improved service integration could be fostered through (1) clarification of existing grant-related rules and reporting requirements; (2) examine definitional differences for special populations; (3) use of PCER reviews and improved information on specific issues (e.g., confidentiality statutes); (4) improved linking of patient information in MIS systems; (5) shared finding approaches with other Federal agencies and (6) information dissemination and targeted technical assistance.

A. Characterizing an Integrated Service Delivery System

Service integration has many facets -- and describing an integrated system of care is reminiscent of the parable regarding the blind men and the elephant. The description depends upon one's perspective. This assessment explored service integration for multi-risk patients from three distinct perspectives, each of which offers insights into the nature of integrated delivery systems.

1. *Delivery System Perspective*

Organizational structures define the outlines of an integrated care system. While three organizational prototypes emerged from the study, agencies often combined elements from these prototypes to create unique delivery systems appropriate to their environments and patient needs. No **organizational pattern appears clearly "preferable" when examining care for individual patients-- each provides a structure that can support and foster development of integrated services for complex patients.**

- ***The "unitary" prototype integrates all services, both for its general and special populations, in a single location*** and offers strong potential for maximizing use of common staff and &a-agency communications. Pragmatically, this approach may be appropriate only for agencies in circumscribed geographic areas, where a central site is easily accessible to all patients in the target populations. Even in these instances, it may not be the most effective manner of organizing homeless services, unless the agency's principal clinic site is located near areas where the homeless tend to congregate.

- ***A "hub-and-spoke " approach integrates multiple clinics (primary care as well as special population outreach sites) with the resources and staff housed at a central location, and links patient information among all sites.*** Management information systems tend to be more developed to enhance communication among sites to the central core. However, if this information sharing is limited to minimal registration information, rather than more substantive clinical information, the agency will also rely on personal relations and case management to achieve integration for patients.

- ***The "linear" prototype integrates care for individual patients in multiple primary care and special population programs through case management and staff networks, rather than relying on a management information system to link patient records. In this*** study, this prototype was observed among agencies whose service responsibilities cover entire county or multi-county areas. Their management information systems tended to be relatively less sophisticated, and unable to link patient information systematically across sites. This prototype is potentially vulnerable when staff turnover occurs, since it relies extensively on personal relationships across sites and with patients. Successful implementation requires addressing the potential for discontinuity when staff turnover occurs.

Among these agencies, each special population program had a distinct organizational structure appropriate to its defined target population. All the homeless programs operated out of distinct sites, either in or near shelter locations. While HIV programs operated out of separate sites or were integrated with a general primary care program, none were housed at the same location as a homeless program. All but one of the perinatal programs operated in conjunction with general primary care, as did the one public housing program included in the study. Linkage-Primary Care/Substance Abuse programs also tended to operate separately, but often served as part of the "glue" to tie together other programs.

Separate structures and physical locations do not mean that programs operate in isolation from each other. Indeed, every agency had evolved intricate systems for sharing responsibilities and information about patient care. For complex cases (e.g., a pregnant HIV-positive woman), case managers work together, combining their expertise to provide more comprehensive, coordinated care to the patient. Agencies used multi-disciplinary teams, cross-training, internal referrals and rotation of personnel to extend their staff capability and maintain strong inter-site coordination in the interests of the patients. Formal and informal arrangements with numerous community organizations expand the scope of services available to patients.

Information exchange is the life-blood of coordinated care. Some of the agencies have sophisticated agency-based management information systems, with unique patient identifiers, that enable staff at one site to access registration information as well as lab results on patients previously seen at another location. Others have site-based systems, with separate intakes and registration numbers, where patient information is maintained at each separate clinic location, and

exchanged via copies, faxes and verbal communications when clinic staff is aware that the patient has visited another site in the agency's system.

In organizing HIV services, agencies must strike a balance among complex factors -- population dispersion, diversity of patient needs, patient desires and agency philosophy. In **some instances, this balance came down on the side of fully-integrating the HIV program with general primary care; in other cases, it resulted in a distinct HIV service site.** Integrating HIV care with other primary care services would ***appear*** to be a "preferred" approach, if only because it helps to remove stigma from the disease. Many of these agencies were serving a mix of patients -- from those in very early stages of the disease to patients with full-blown AIDS. For patients in later stages of the illness, separate clinics may offer (or are perceived to offer) more up-to-date treatment options, greater opportunity for participation in clinical trials, and reduced risk of further infection. Additionally, to attract specialized personnel (e.g., an infectious disease specialist) to an agency's staff, there may need to be a critical mass of patients in an HIV clinic, rather than spread across multiple primary care clinics.

HIV service organization will likely continue to evolve, particularly in response to the changing demographics of the disease. Agencies whose caseloads are now largely male may see increasing demand for services from HIV-positive women with few outward manifestations of the disease. Facilitating access for these women may mean providing care for their (HIV-negative) children at the same location -- an event that could force reorganization of an HIV program. Conversely, other agencies may see increases in severely ill patients, and have to consider the best method of providing specialty services and avoiding risks of opportunistic infections. In short, **flexibility in Bureau policy and adaptation at the local level are the watchwords as agencies seek to respond to changing needs among patients with HIV disease.**

2. *The Patient Perspective*

Regardless of approach or organizational arrangement, one theme emerged: find the appropriate "medical home" for each patient. The type and location of that medical home depends upon the hierarchy of each patient's medical conditions, co-morbidities and disease stage. Pregnancy tends to assume first priority, followed by presence of HIV disease. This order, however, is flexible and often adjusted depending upon severity of disease and other complications in a person's life. For example, a substance abusing, HIV-positive client may not have any manifestations of HIV disease. For this patient, addressing the substance abuse problem may be the most immediate concern and the agency may seek care at a community agency specializing in substance abuse care.

Once the hierarchy of medical needs is established, organizational attributes and patient preferences become pertinent. For example:

- **A multi-site agency often transfers HIV-positive patients to their specialized HIV program.** A homeless patient, however, may have established a relationship

with staff at the homeless clinic prior to the HIV diagnosis. If maintaining that relationship is important to keeping the patient in care, the patient will continue at the homeless program, with support from HIV staff.

- **Agencies with several grants addressing a similar medical condition will consider other social factors in planning a patient's path through the system.** A pregnant teen might be enrolled in a state-funded program for teen-age mothers because it offers more social supports and educational assistance than the general perinatal service supported by CPCP.

Mapping patient flow from intake to assignment to a "medical home" reveals a potential source of discontinuity. **Homeless patients who enter the system through the "primary care door," not the homeless program, may not be initially identified as "homeless."** At intake/registration, a patient is asked for an address; the assessment process often includes inquiry into the type of living arrangement and whether the arrangement is safe. Program staff indicated that clients do not always reveal the nature of these living arrangements, particularly in instances where a woman fears losing custody of her children. Some of the programs do not consistently pursue determination of homeless status at their primary care sites. This may stem, in part, from a natural response to limited resources (e.g., if the homeless program is already oversubscribed). Nevertheless, lack of this essential information impedes service integration and may result in loss of some important benefits to the patient.

Three themes characterize patients' views of the programs and the care they receive.

- Regardless of location, method of organization or patient's medical condition, ***most patients "loved the center" --*** *and* ***particularly their case managers.*** For these patients, the case manager did more than facilitate access to clinical and enabling services. **Patients see a caring, trusting relationship with the case manager that helps them to work their way through the system -- and ultimately motivates them to continue in care.** Outreach workers who are usually indigenous appeared to add an extra layer of support in coordination.

- Few patients cited specific coordination issues, perhaps because of the extreme difficulty many had experienced in accessing services prior to contacting the program. In only **one instance did patients appear aware of different funding streams; this was due to separate intake evaluations and eligibility requirements for the programs.** Some patients felt that repeat intakes when they were referred to another program helped them to develop rapport and relationships with the staff.

- While patients were satisfied with their providers and the care they received, they also highlighted concerns, two of which were particularly relevant to service

coordination questions. First, they disliked **double booking and waiting time,** particularly for test results and discharge after an appointment. Second, staff **turnover can** be particularly upsetting, particularly when a patient has developed a close relationship with a case manager. While patients recognized that it is impossible to eliminate turnover, they suggested more training and orientation to facilitate the transition.

3. ***The Clinical Perspective***

Ultimately, the question is not *how the* agency organizes to achieve service integration, but rather *whether* patients receive the range and scope of services required. **Review of the entire patient record, including both medical and case management notes, by and large pointed towards coordinated care, particularly for pregnant women and HIV-positive patients; coordination for the homeless was more problematic although charts for women and children who were shelter based showed better documentation than those for the more transient homeless. Charts also revealed significant physical health and social co-morbidities among these populations,** far beyond the immediate "risk" that brought them under the umbrella of our consideration.

For purposes of this review, "coordination" was defmed as documentation of assessments, provision of clinical and social services according to the assessments, collaboration among practitioners, and evidence of "closed-loop internal and external referrals" (e.g., results and follow-up on referrals documented in the chart).

- *Perinatal charts* revealed the highest level of case management, planning, and closed loop referrals. Delivery and postpartum records were available, even in those instances where patients were delivered by hospital residents, not agency staff.

- Charts for *HIV infected* individuals also revealed a high degree of planning, coordination and closed loop referrals. Where medical treatment was provided through hospital personnel, the case manager's records would generally but not always, include both social services and medical information from hospitals and clinical trials that would be transferred to the patient's medical record.

- *Homeless patient* charts were more likely to reveal difficulties in service coordination. While there was extensive documentation for persons living in transitional shelters, the charts for "street people" and transient users of health centers were leanest in terms of documenting case management and service integration and revealed high rates of "no-shows". These charts also pointed towards extensive verbal communications among staff and with patients, perhaps reflecting both episodic contacts by patients and street outreach and case managers.

For all patients, charts showed extensive intake assessments. **Laboratory tests were the primary clinical area showing variable practice.** Tuberculosis was the only condition for which screening was not consistently conducted. There was also substantial variability in screening for streptococcal infection among pregnant women.

B. Improving Service Integration -- Issues and Recommendations

Agency organizations and systems for service integration have evolved over time, in response to (1) patient clinical and social needs; (2) agency history, philosophy and external environment and (3) availability of categorical grants to address specific community concerns. Some of the issues impeding further improvements stem from the interface of multiple funding sources. Others stem from grafting new programs onto preexisting structures and practices. Issues and recommendations fall into six principal categories:

- Grant-related rules and reporting requirements
- Integrating multiple categorical grants
- Clinical organization to address patient needs
- Patient records and management information systems
- Funding essential support services
- Information dissemination and technical assistance

1. *BPHC Rules and Reporting Requirements*

An observant reader of this report probably noticed that issues stemming from BPHC rules and requirements were rarely mentioned -- because **study agencies rarely highlighted BPHC program requirements as significant concerns for service integration.** Interviewees tended to respond to questions from an administrative or financial perspective.

- Some highlighted fiscal issues, in particular the administrative cost limit under the Title IIIb statute. Public agencies mentioned the burden of federal audit requirements, as applied to their complex systems.
- Most noted that BPHC requirements bad improved. The Single Grant Application (SGA) simplified processes substantially; one interviewee who recently completed her first SGA commented "it was a nightmare, but it was wonderful." They also said that differing reporting definitions among the BPHC programs (e.g., of applicable age groups) had posed reporting burdens in the past, but that the new

Uniform Data System addressed many of these difficulties. Although some of the agencies had program-specific databases to complete specific reports and tables (e.g., a perinatal database), none indicated that this was particularly burdensome -- perhaps because the systems had been in place for some time and staff had accommodated their ongoing practices.

Agencies were more concerned about differences in definitions and reporting requirements among federal agencies -- and between federal agencies and the states. To the project team, it appeared that, as BPHC has reduced discrepancies among its programs, differences across federal and state agencies have emerged has more important. Study participants recognized that these differences are probably an inevitable corollary of receipt of multiple categorical grants -- but the time and expense of multiple reports is clearly substantial. One administrator even suggested that, because state programs are supported by federal as well as state dollars, the federal government should develop uniform reporting for all programs.

Although BPHC rules and reporting requirements do not create distinct "barriers" to service integration, some do affect the manner in which agencies organize the process of patient care. The project team noted the following:

- Some agencies believe that ***compliance with regulations and reporting requirements is simplified if they conduct separate patient intakes and assign separate patient identifiers at each of their sites.*** This practice, however, leads to duplicative processes for patients; clinicians may have incomplete knowledge of the patient's medical history, unless the patient reveals prior contacts with another agency clinic.

- Some agencies appear to believe that ***funding rules require that each site maintain site-specific patient information and charts.*** One interviewee specifically stated that BPHC requires a separate chart at the specific program to count the patient as a user. Another said that state rules required separate charts. ***Review of BPHC requirements suggests that this is a misinterpretation.*** For reporting purposes, BPHC defines a program "user" as someone who has an encounter with the program. The definition of encounters states that "services rendered must be documented" but does not say that where documentation should be physically maintained. [1]

- ***Working definitions of reporting requirements can influence the patient intake process -- and ultimately identtjication of a patient 's full complement of medical and social service needs. This*** particularly applies to the homeless who access care at a site that does not have HCH funding. At these clinics, a patient's homeless

'Uniform Data System Manual, page 6.

or near-homeless situation is not always identified, and all agencies did not include the near-homeless in their "working definitions" for everyday intake and screening purposes. Most of these agencies did not know the number of homeless individuals served at non-HCH funded locations, a phenomenon which, if prevalent, has implications for the data to be reported on the UDS.[2]

Recommend&ions. To improve service integration, BPHC could encourage agencies to reduce duplicative information obtained during intake. BPHC could also reassess, and clarify as necessary, the definitions of "documentation" and of "homeless users" included in current rules and reporting requirements. To the extent possible, BPHC could work within DHHS -- and with other federal agencies and states -- to reduce differences in definitions and the effect of reporting requirements.

2. Integrating Multiple Categorical Grants

In a world of increasingly limited resources, every agency is forced to package funds from multiple federal and state sources to meet the complex medical and social needs of multi-risk clients. Inevitably, each grant includes a somewhat different service package and has slightly different eligibility requirements. For example, BPHC has two programs for enhanced perinatal services.

- CPCP supports enhanced services, such as intensive health education, home visits and case management, risk assessments (including a clinical nutrition and psychosocial evaluation) and childbirth education classes. CPCP funds tend to be used in conjunction with "general" perinatal care services, with medical care covered by Medicaid.

- SIMRI (Special Infant Mortality Reduction Initiative) also provides enhanced services, to a target population defined by the agency in their original grant application (e.g., a small geographic area with a large African-American population. SIMRI grant can cover a broader scope of services than the general perinatal program -- and eligibility for case management support can be longer than Medicaid's. At the SIMRI agency in this study, eligibility continued until the child's first birthday, significantly longer than Medicaid eligibility for pregnant women.

Every agency with multiple funding must target their resources -- and inevitably "routes" patients among various programs to maximize available resources. This process, however necessary, has an unavoidable corollary -- patients with similar medical and social needs may

*Table 4 of the UDS requests information on all known homeless users, regardless of where the patient received care.

receive a different mix of services. In the example above, an individual Hispanic woman may have the same risks as an African-American woman, but limited SIMRI resources may preclude her from enrollment in this targeted program.

Recommendations: BPHC could examine ways of reducing the effect of definitional differences among special population grants, to improve service integration. One legal issue deserving exploration is whether an agency that targets its grant application to a discrete sub-group is required to restrict services to that population during program implementation. Agencies with multiple federal and state grants could be encouraged to assess the interaction of eligibility provisions to determine whether (and how) agency practices might be modified.

3. *Clinical **Organization** to Address Patient Needs*

Reviewing charts for evidence of service integration is far more labor intensive than reviews that document quality of clinical care. A "service integration review" requires use of case management notes, as well as the medical record -- and the case management records tends to be kept separately and is quite voluminous. Key elements in charts promote service coordination include:

- ***Combining case management and clinical records in chronological order.*** Alternatively, if case management records are separate from medical charts, ***abbreviated case management notes*** in the body of the medical charts appear to enhance the comprehensiveness of care.

- Use ***and completion of flow sheets, problem and medication lists*** appears to assist with screening for preventive measures. Since many patients obtain prescriptions outside the clinic walls, medication lists can assist in preventing adverse drug interactions. Brief review of clinical and psychosocial problem lists may enhance ability to deliver care.

- ***Documentation of tracking and follow-up of referrals,*** both in the medical chart and in the case management notes appears to enhance closed loop referrals.

- ***Sharing records,*** particularly if a patient is co-managed, appears to decrease missed opportunities or duplication of tests and provides a broader picture (e.g., where co-managed HIV patients are also enrolled in clinical trials.)

- ***Documentation of "address " on each and every visit,*** particularly for highly-mobile patients, appears to enhance ability to follow-up. This is particularly important for homeless patients, whose charts were the leanest in terms of documentation.

Statutory requirements regarding confidentiality of HIV-test results constrain the ability to exchange essential medical information, even within the agency. While all agencies went to great lengths to protect confidentiality in their systems, statutes in California and Arizona are particularly constraining on medical personnel. California law prohibits "posting" results of a HIV test in a medical chart; the California agency included test results only in the notes of the case manager who conducted the pre-post test counseling. Arizona law requires any person wishing to review the records of any HIV positive person to go through a complex review process, provisions which have limited exchange of important medical information when patients are referred between the HCH and HIV programs.

Two other clinical issues deserve mention:

- ***HIV-testing andpregnant women. While*** all the agencies followed 076 protocols, the charts clearly indicated that intensive efforts were required to get some patients to agree to the test. This has important implications, both for the level of resources required to meet BPHC's objectives in this area -- and for the likelihood of achieving targets included in the recent Ryan-White legislation.[3]

- ***Variance in screening.*** There were two conditions -- tuberculosis and streptococcal infection among pregnant women -- for which screening was not consistently conducted.

Recommendations. To focus attention on service integration issues, BPHC could consider whether elements of a "service integration review," as defmed above, might be included in the PCER. PCER reviews also provide the vehicle for determining the extent of screening for tuberculosis and streptococcal infections. Finally, BPHC could comprehensively assess state confidentiality statutes regarding HIV care, the extent to which they impede integrating records and/or sharing information among providers, and realistic alternatives for agencies.

4. *Patient Records and Management Information Systems*

Among these agencies, the intake process, records and information systems exhibited two distinct, and interconnected, patterns:

- A ***site-based approach,*** in which separate intakes and assessments occur at each distinct clinic a patient visits. Clinics maintain their own charts, usually with clinic-specific patient identifiers.

[3]**BPHC has recently contracted with MDS Associates for a study of HIV-testing and counseling for pregnant** women among its agencies.

- Under an ***agency-based approach,*** patients go through a single intake process, which includes assigning a unique patient identifier used at all sites where the patient receives care. In most cases, charts are stored at one location, but patient information is accessible to all sites, either from an on-line MIS and/or copies of charts maintained at outlying sites.

Patient records and information systems have evolved over time and new systems (e.g., a newly-developed computer system) have been grafted onto older processes. Agencies with ***site-based*** systems highlighted ease of access for practitioners and simplicity in meeting reporting requirements as relevant considerations -- and cite extensive formal and informal staff communications as the critical medium of information exchange. Agencies with ***agency-based*** systems felt that access to more comprehensive data enabled them to manage individual care better and assure that patients did not "fall through the cracks. "

While agency-based systems appear to have more potential for integrating services, these apparent differences do not translate into practice. Experience with these agencies showed that site-based systems which are tied together with staff and case management networks can be just as effective at coordinating services for individual patients as agency-based networks. However, site-based systems do have greater potential for discontinuities, particularly in very large programs with numerous grants. Agency-based systems also provide readily available and consistent information, useful when staff change.

The greatest argument against converting site-based approaches to agency-based systems is the cost of change. Such a conversion requires (1) reassigning all patient identifiers; (2) developing and implementing new patient intake practices; (3) retraining staff; and (4) technological computer costs. In today's fiscally constrained environment, expenditures to change these systems take low priority -- on the grounds that "if it ain't broke, don't fix it." On the other hand, systems that permit easy tracking of patients who use multiple sites may become increasingly critical to monitoring use of services and referrals under managed care.

Recommendations. Bather than redesigning current systems, agencies and BPHC might explore more effective ways of linking patient information with the basic programming and resources now in use. For instance, major vendors might be asked to assess the feasibility of using algorithms based on (1) name; (2) birthdate and (3) social security number -- the three elements commonly used to link records in national databases. Insurance identifier (e.g., Medicaid number) could be used to link data for some, though not all, patients.

5. *Funding Essential Support Services*

Availability of funds influences who obtains access -- and how much care is received. Not surprisingly, patients with third-party coverage (particularly Medicaid) and those who fit criteria applicable to a particular categorical grant received more continuous care. One interviewee

characterized the difference between treatment for a 25-year old woman and that for a 49-year old.

- Because the 25 year-old is of reproductive age, she meets categorical program criteria, would be Medicaid-eligible if she became pregnant -- and may receive a wide variety of services.

- The 49-year old woman, even with a serious chronic condition (e.g., hypertension) is unlikely to fit categorical criteria (unless the agency has a special grant addressing hypertension). She would also be ineligible for Medicaid (unless she were receiving AFDC or SSI) -- and may receive less (if any) case management and similar services.

A variant on this problem was observed among pregnant women and children, where children born in Mexico were not eligible for Medicaid, while siblings born in the United States were eligible.

In many instances, multi-risk patients may receive more comprehensive care, because the special population grants cover enhanced services and case management that make it easier to fully integrate care. **Limited availability of behavioral health services constituted a major service gap.** Agencies particularly highlighted shortages of mental health, counseling and substance abuse treatment services in their communities. For multi-risk patients, in particular, these services are critical to addressing health problems and improving health status.

Recommendations. Insufficient funding is an endemic problem -- and all agencies face the challenge of finding ways to "do more with less. " BPHC could work with SAMSHA to explore new ways of linking their resources, building on the "shared program" model applied under the Linkage-Primary Care/Substance Abuse program. BPHC could also examine the extent of the "service gap" for multi-risk patients (e.g., how many who require these services do not receive them), to document necessity for including coverage in managed care plans.

*6. Information **Dissemination** and Technical Assistance*

While all of these agencies were creative and adept at developing integrated services for individual patients, most had not looked at service integration as a systemic issue. Several interviewees commented that preparation for the site visit had led them to look at their programs from new perspectives -- and consider ways they might change their processes to improve coordination.

- Most of these agencies have **limited information on the extent to which their patients use multiple programs.** While they tend to believe that the number of patients who move among sites is relatively small, this is based largely on an anecdotal "feel" for their programs. Since most did not know the number of

homeless individuals using general primary care sites, the project team tended to believe the population might be larger, but there was no clear evidence to support either view.

- Agencies have **limited knowledge of how other agencies handle service integration questions. Since** most look at coordination of care from the individual patient's perspective, the question of how their systems and processes affect integration probably rarely arises. Agencies felt that additional "how-to" based on other agencies' experiences would be useful. One interviewee noted that middle management and patient care staff rarely have the opportunity of seeing other programs, and suggested "staff rotations" to other agencies.

The changes brought by managed care raise an entirely new set of concerns. Of necessity, most agencies are currently focused on immediate and fundamental issues (e.g., level of primary care capitation rates; system transitions required to operate effectively under managed care). As Medicaid managed care matures, agencies will also have to address issues specific to multi-risk populations and service integration (e.g., risk adjusted capitation rates; coordinating behavioral services; continuity for the homeless).

Recommendations. BPHC can foster attention to coordination issues by disseminating "best practice" and case study information, through written documents and presentations at national and regional meetings. These efforts should highlight "how-to" information and specific agency approaches, as these seem to be most useful to agencies involved in day-today operations. BPHC could also analyze the prevalence of "multi-program/multi-risk" patients (perhaps using new UDS data), both to determine the "true" extent of the problem and to target technical assistance. Finally, BPHC could assist agencies in assessing the implications of managed care for integrating services to multi-risk patients. The experience of agencies who have been providing care to multi-risk patients in a capitated environment would be invaluable to others seeking to address these complex questions.

APPENDIX A:

Summary Profiles of the Study Agencies

Centro del Barrio -- San Antonio, TX
Clinica Sierra Vista -- Lamont, California
Great Brook Valley Health Center -- Worcester, MA
Maricopa County Dept. of Public Health and Maricopa County Health System -- Phoenix, AZ
Multnomah County Health Department -- Portland, OR
William F. Ryan Community Health Center -- New York, NY

Centro del Barrio (CDB) -- San Antonio, TX[1]

Located in San Antonio and serving the residents of the city and Bexar County, Centro del Barrio's services are provided from a central core site with the full package of primary care services (South Park Medical Care Center) and a number of "outreach clinics" located throughout the county and city.

Special Population Grants

Centro del Barrio receives the following grants directly from the BPHC:

- Community Health Centers (330)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Health Care for Homeless - Children (340s)
- Ryan White Title IIIb (HIV)

In 1995, BPHC grants combined to make up almost 43 % of the total revenues of $5.6 million for Centro del Barrio. The Section 340 grant provided nearly 56% of the total Health Care for the Homeless program revenues, while 93 % of the revenues for the HIV program came from the Ryan White Title IIIb grant. Medicaid payments accounted for 20% of total agency revenues.

I. Programmatic Integration

Organization

Centro del Barrio's system of service delivery is built around a central primary care center -- South Park Medical Care Center (SPMCC) -- providing the full complement of medical, dental and enabling services. Seven additional sites provide services to the homeless, HIV-positive clients, and rural residents of Bexar County. While the special population programs operate at separate locations, a sizable proportion of clinical staff rotate among the programs and sites. Conversely, patients receiving primary care at a special population site (e.g., homeless) receive specialty services and dental care at SPMCC. Staff report that most patients tend to receive care at one location, although they are not required to do so.

[1]The site visit team (Deborah-Lewis Idema, Pete Stoessel and Dr. Tanya Pagan Raggio) visited the Centro del Barrio Community Health Center on April 18 and 19, 1996.

The organization of care at Centro del Barrio appears to stem from two characteristics of the center's approach to care. First, the Executive Director and other CDB staff express a "holistic" philosophy of treatment that targets both the patient and the psycho-social development of the patient's family. Second, CDB places strong emphasis on internal coordination and external linkages with other programs that can facilitate coordination for patients and expand the range of available services. Staff indicate that this approach may reflect both the environment in San Antonio -- and the social work/mental health background and training of key personnel.

- Since October, 1995, ***HIV- Early Intervention Services*** have been provided at a distinct site (Laurel Heights) -- a new clinic which provides both HIV-related and general primary care services. Before the move, the program was co-located with a hospice primarily serving late stage, male AIDS patients. Patients seeking care from CDB's clinic, particularly HIV-positive women, did not find the hospice an attractive environment, and patient loads began to fall. Since relocating to Laurel Heights, enrollment has doubled (from 154 to 300) and the program has enrolled 54 new female patients. The clinic also schedules general primary care sessions for the surrounding community.

- ***Homeless programs are*** run in area homeless shelters -- Dulnig, Dwyer, SAMM, Children's Shelter, and the Battered Women's Shelter. The CDB clinics provide primary care (including prescription drugs), specialty services at SPMCC and referral services through other providers [e.g., University of Texas (UHS)]. Because of extremely high need, the dental program located at SPMCC has allocated 2 sessions a week for homeless children, who are bussed to SPMCC from the shelters. The homeless program also coordinates closely with numerous social service agencies; the CDB clinic at the SAMM shelter shares space with these other agencies.

- The ***CPCP program*** operates from the South Park Medical Care Center, and collaborates with UHS and private hospitals to provide deliveries. The program has a full-time OB-Intake Nurse, who provides extensive case management and follow-up services. High-risk patients are referred to UHS. The program delivers an average of 36 infants each month.

Care coordination is facilitated by CDB's staffmg pattern. There is one Program Director responsible for both the HIV and Homeless program; another Program Director is responsible for CPCP and the central SPMCC clinic. One medical director, who rotates among all sites, oversees clinical services. In addition to the usual complement of medical, dental and support staff, CDB has several child development specialists, who work particularly with homeless children.

Management and Financial Systems

CDB uses Resource America (Version RAMS 5) on a system-wide network. **Staff** at any one of the clinics can access individual patient information. The system includes patient descriptors and serves as the billing/accounts receivables system. Basic BPHC required reports (e.g., BCRR/UDS) are generated from the system; special reports (e.g., the perinatal report) require specific computer programming and data sources, including drawing information from patient records. Complete financial tables are not automated through the MIS. The accounting department at Centro del Barrio utilizes a separate computer software program to produce financial reports.

Patient identifiers include: social security number; insurance number, and medical chart number. Computerized patient information also includes: name, address, preferred language; primary care provider; account balance; and the clinic identifier (e.g., where the patient was registered and medical charts are available. *While all patient information is maintained in a centralized file, patients are "reregistered" at each clinic site used.* For example, a homeless patient receiving care at the SAMM shelter and SPMCC will have two patient records and medical charts. Copies of the charts are maintained at each clinic.

Although patients are registered, one can determine whether an individual patient uses more than one site. Because the networked computer display shows a list of CDB patients, by name and birthdate, the two records for an individual patient appear on consecutive lines. However, the system is not currently configured to unduplicate patients across sites (or programs) for aggregate reporting.

Encounter forms from each patient visit are sent to the central billing department at SPMCC from each individual clinic site. The billing department separates encounter forms according to: (1) self-pay; and (2) third party payer by site, before entering them into the system. Third party charges are entered in order to produce bills. Because data are entered by site, encounters and related revenues/cost can be charged to specific programs. Personnel costs for each program are allocated based on the percentage of time spent at each site. Because most Centro del Barrio staff are not assigned to a particular program, personnel time is monitored very closely, and their costs are counted as direct costs in most cases. Staff time in programs is determined according to the time sheets turned by each practitioner and staff member every two weeks.

II. Coordination of Care for Individual Patients in Multiple Programs

A combination of staffmg arrangements and referral networks assure care coordination for multi-risk patients.

- All patients have a case manager. For the "general primary care" patient, this responsibility is often fulfilled by the clinician. Homeless and HIV patients have assigned case managers (most often a social worker). An "OB Intake Nurse" assigned to the CPCP program completed initial assessments, including health education and eligibility for other services. All pregnant women are offered HIV counseling and testing; they have experienced 100% "take-up," but sometimes several counseling sessions are required. Ongoing case management is provided by the clinicians and the OB Intake Nurse.

- Rotating staff among programs is an integral part of assuring care coordination. Both the HIV and Homeless program have regular case conferences; teleconferences for practitioners at all sites are scheduled every month at the South Park Medical Care Center. On the third Wednesday of every month, program staff from each module (family practice, dental, OB/GYN) meet to discuss issues and concerns.

- Staff use both formal and informal approaches to internal referrals. Many referrals are made by "word of mouth" between (and among) staff across programs. A simple "speedletter" is often used for written communications (e.g., for a case manager at a Homeless site to inform SPMCC about a referral or a request for follow-up). These methods of communication are effective, in part, because staff rotate among programs and are therefore more familiar with each other (and each other's patients).

- CDB also stresses collaboration and referral with other providers. In some instances, collaboration means co-location at CDB facilities; on-site Medicaid eligibility workers are located at SPMCC while WIC staff are present at this clinic and at the homeless shelters. In other instances, referrals are made to outside agencies. For example, substance abuse services and employment services for the homeless are provided by other agencies co-located at the shelter. CDB's close relationship with University Health Services facilitates (1) referrals of high-risk pregnant women; (2) participation of HIV patients in clinical trials; and (3) rapid emergency services for homeless patients. CDB has on-line access to University Health Services that enables them to receive test results for referred patients quickly and efficiently.

Patient Discussion Group

The group included individuals from the homeless and HIV programs. Case management, and the wide degree of referrals available to the persons in the programs, were system aspects identified most frequently during the session.

- Patients were very pleased with the level of care and services provided by Centro del Barrio's staff. While most seemed unaware of any particular revenue stream funding their care, several were quite knowledgeable about the benefits available to them.

- Patients appeared particularly to value the availability of dental care, and indicated that their first contact with CDB was often for dental services, either for themselves or their children. Transportation assistance (including the homeless program's van and "gas vouchers") was also mentioned. As in other sites, patients also stressed the attention and "caring" of CDB program staff.

III. Characterizing Service Integration at Centro del Barrio

Centro del Barrio delivers care through a system that emphasizes the treatment of not only the client, but also the client's family. Services not provided directly by Centro del Barrio appear to be readily accessed by staff, through their referral networks. CDB staff indicate that their "family-oriented" approach grows out of the social work and mental health training and experience of key personnel.

- Special population programs are physically located in so-called "outreach clinics" to assure accessibility for patients. Indeed, geographic accessibility appears to be a high priority. For instance, Homeless program staff may refer pregnant women to University Health Services, rather than the SPMCC prenatal program, because University is quite close to the shelter.

- There is close collaboration (and frequent inter-site referrals) between the "outreach" clinics and the central site at SPMCC. This collaboration is furthered by an organizational pattern that relies on a few individuals (e.g. Executive Director, Medical Director, 2 program directors) to provide high-level oversight and direction.

- Rotation of clinical personnel among all sites is a critical element to assuring service integration. In addition to communication among staff, this staffing model enhances continuity of care for individual patients. For instance, clinicians can see a patient for the first time at an "outreach clinic" (e.g., homeless or HIV program) and then provide more extensive follow-up care at SPMCC.

Major issues raised by the agency focused on reporting requirements, desire for additional information and technical assistance, and the need for additional financial support to enhance information systems.

- Pre-UDS reporting requirements for the Health Care for the Homeless program required special tabulations not used for other reporting. The UDS should improve this situation.

- Staff suggested more extensive dissemination of information among BPHC agencies. One suggestion was that BPHC have a method or process whereby CHC personnel could have a "training experience" at another center. Exposure to other programs could assist organizations like Centro del Barrio in transitioning to a managed care environment, and determining how to better coordinate services to special populations at a time when funding is becoming more limited.

- CDB clinicians currently have on-line access to patient test results done at UHS. They would like to be able to access clinical notes that are on-line as well. This would require the purchase of an upgrade package for the current MIS, not included in current budgets. The staff felt that BPHC should assist the agencies both financially and with technical assistance to improve their MIS capabilities.

Clinica Sierra Vista (CSV) -- Lamont, CA'

Clinica Sierra Vista (CSV) is a network of 10 clinic sites, ranging from the large central clinic (called Clinica Sierra Vista) in Lamont to small one-physician sites in the mountains and Death Valley. During the site visit, members of the site visit team had the opportunity to see four of the ten sites (two primary care, 1 homeless and 1 HIV).

Special Population Grants

Clinica Sierra Vista currently receives the following grants directly from BPHC:

- Community Health Centers (330)
- Migrant Health Center (329)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Ryan White Title IIIb (HIV)
- Special Infant Mortality Reduction Initiative (SIMRI)

To put the BPHC contribution in perspective, BPHC dollars accounted for nearly 20% of the $16.5 million total agency revenues in 1995. The Health Care for the Homeless program received 71% of its funding from the Section 340 grant; while Title IIIb funds accounted for nearly half of the total HIV program revenue. Clinica Sierra Vista also received Ryan White Title II funds. The Perinatal program receives CPCP and SIMRI and funds from two state programs for pregnant and parenting teens (Adolescent Family Life Program and Cal-Learn). CSV also administers 14 WIC sites in Kern County.

I. Programmatic Integration

Organization

CSV is a complex system of 10 major health centers spread across two counties (Kern, Inyo - California), serving an area larger than the state of Massachusetts. The centers are placed in a variety of urban, semi-rural, and isolated rural communities. Geographic location, space considerations, patient characteristics, and patient choice all appear to contribute to the patient profile of individual centers. For instance, sites in the mountains appear to have more insured patients, while Bakersfield -- the major population center -- is home to both the HIV and homeless programs.

'The site visit team (Deborah Lewis-Idema, Cheryl Ulmer and Dr. Tanya Pagan Raggio) visited Clinica Sierra Vista on January 30 and 31, 1996.

Each of these 10 centers offers primary care; seven offer the Maternal and Child Outreach Program (funded by CPCP and other dollars); one specializes in health care for the homeless; and one on the needs of persons with AIDS. While CSV has specialized service sites for persons who are homeless or HIV positive, individuals with these conditions are also seen at other sites. In addition to the health centers, CSV administers 14 WIC centers (8 collocated with health centers); an Adolescent Family Life Program/Cal-Learn (a stay in school/job training/birth outcome improvement program for pregnant and parenting teens) at 6 sites (1 collocated at CSV); 3 school based clinics; and 6 Neighborhood Partnerships (integrated services relating to children and families across a spectrum of health and social services) all paired with health centers.

CSV operates each of its special population grants as a distinct "program," with its own budget, cost center, and tracking of information. Some of these "programs" operate within a general primary care center (e.g., CPCP and SIMRI), others have a separate location. The homeless program recently moved out of the local homeless shelter into a free standing clinic site. The HIV program operates in a free-standing location (34th Street Center) providing service to HIV-positive patients and their families.

Management and Financial Systems

Each site assigns patients an identifier that includes its particular site suffix. This is done both for internal management purposes (e.g., to assess encounters per provider at different sites) and to facilitate required reporting. However, it also yields user counts that are unduplicated by site but not unduplicated across sites. The extent of duplication is not known; it could be a small or a large problem. The potential for duplication (and/or insufficient tracking of the patient) varies, depending upon whether the patient is referred from one site to another.

- If the patient is referred from one site to another (e.g., from the homeless program to the CSV site for lab tests), the second site is usually informed of the preexisting identifier -- and the patient may bring the medical record.

- Patients do also cross sites on their own -- going, for instance, from the homeless site to the Bakersfield primary care clinic. In this situation, the second site does not necessarily know that the patient had previously used the program, unless the patient volunteers that information.

In addition to individualized identifiers, each site appears to do independent "intake" and record these data in the computerized database. Enrollment data is on-line with most of the clinics and all the major ones. Sites are connected to the "host" at Lamont, and patient information is entered directly into the system at intake.

Patient demographic data is separate from clinical information, and from financial systems. Similarly, medical charts and social service/case management charts are separate. Each program keeps its own charts. Some programs, particularly the perinatal program, maintain separate

databases, including some medical information, to ease data tabulation for reporting requirements. Results of HIV tests are required to be kept separate, by California law. As we understand it at present, the law prohibits recording test results in the patient's medical chart, unless the patient has self-identified as HIV-positive. Case managers keep this information entirely separate.

Certain patient characteristics are not recorded in the database, making it difficult to assess the extent of multi-program crossover. For example, unless a person is actually enrolled in the homeless program; their homelessness status will not be recorded. Thus the number of homeless served by CSV is likely understated. Similarly, the number of HIV-positive patients served across the system as a whole is unknown because: (1) clients may receive testing and counseling at any of the CSV sites, not only the main HIV/AIDS treatment site, and (2) their test results are not recorded in the computers. The number served at the 34th Street Health Center (the HIV program) is obviously recorded. There was anecdotal information that staff saw three HIV-positive pregnant women in the past year. The overlap between homelessness and positive HIV status is not known.

Insurance and payment (sliding fee) information are maintained in the patient enrollment database, not the financial system. This information is updated at least every six months -- and more often if patient indicates there has been a change.

As noted, each program has a distinct budget, including both federal grants and other funds. Volunteer staff (which are particularly important in the homeless program) are budgeted as in-kind. Each program is held to its specific budget, and the administration does not "budget" funds to cover any short-fall in a special populations program. Patient revenues are tracked by program/cost center. Because patient encounter forms identify each site -- and most of the grant programs are tied to a single site -- third party program revenues can be tied back to the program. In this manner, patient fees, Medicare (for disabled) and Medical reimbursement is allocated to the appropriate special population program.

II. Coordination of Care for Individual Patients in Multiple Programs

CSV has brought together county government and community-based groups to reduce duplication of effort to afford a better array of services for the patient population each serves. For example, CSV provides WIC services at Kern Medical Center (KMC is the county hospital), and KMC doctors and residents provide obstetrical support for delivery of CSV babies.

Intake/Assessment. Within the CSV system, there are multiple intakes and assessments across programs. Sometimes one staff person will take the intakes for more than one program (e.g., WIC community health worker does the history and intake for the SIMRI program); other times the client is referred to another program and goes through another intake (e.g., pregnant teen referred to CAL-Learn has another intake).

Multi-disciplinary Teams/Conferencing. The use of teams and conferencing varies by the type of program. The Healthy Start/Neighborhood Partnerships use teams to plan outcomes (e.g., job opportunities, health services, housing) for families in the program. The homeless program has internal dialogue but not formal conferencing, primarily due to staff size limitations and dependence on many volunteer doctors; the medical emphasis tends to be on urgent medical crises. On the other hand, the HIV program at 34th Street has bimonthly case conferences including medical staff, case managers, mental health personnel and outreach workers.

Monthly program coordinator meetings across the programs (e.g., SIMRI, MCOP, HIV, HCH) cover common issues and share information on the resources their programs offer. In early 1996, coordinators were discussing a new intra-CSV system referral form which incorporates patient consent to share information across sites. Each coordinator serves as a resource person that the others feel comfortable calling upon when services are needed from that program.

Program Enrollment and Assignment to Primary Provider/Case Manager. This is determined by what door the client walks in and by line staff's assessment of the client's primary need. For example:

- A pregnant teen might receive her prenatal services at the California Avenue clinic where she originally comes for care. While this clinic has CPCP, including case managers, she is more likely to be assigned to a social case manager at an AFLP/CAL-Learn site, although the CPCP program has medical oversight during the pregnancy. Receiving case management through CAL-Learn provides additional benefits because (1) CPCP program only follows through six weeks post-partum, while the AFLP program can follow her through age 20 and (2) the program provides special supportive services for staying in school not included in the "regular" perinatal program.

- A client who is homeless and HIV-positive may have strong relationships with the homeless program and prefer to maintain a relationship with that site. In this case, HCH will provide social case management, and the HIV site will manage medical care.

These two examples are typical of the manner in which CSV staff, across all programs, describe their operations. Staff indicate that they share work, but do not duplicate.

Medical Records

Social case management records are separate from the medical chart. Depending on the program, the social case management record may or may not be at the same site as the medical chart. The location of the social case management chart seems to depend, in part, on where the case management staff are based. For example, a SIMRI outreach worker kept social case management records at her neighborhood outreach center which was her principal location while

the medical charts were at the East Bakersfield Health Clinic. Service integration across programs and for medical and social services appeared documented in the charts.

Patient Discussion Group

The group included patients from the perinatal, homeless and HIV programs. Key points made during the group discussion were as follows:

- Patients consistently spoke of the caring atmosphere and the dignity that they were accorded at CSV. Some contrasted this with other providers (e.g., VA hospital, county medical center)

- Patients select a particular service site in the CSV network, based on references, geographic proximity and availability of needed services. They discussed perceptions of the newest site (East Bakersfield), which is in the toughest part of town, and an area many patients perceive as unsafe.

- Counseling and case management were the most "important! aspects of care mentioned. These patients highly valued continuing relationships with caring supportive staff. The best example may be in perinatal. Most patients are delivered at Kern County Medical Center by hospital residents. Patients uniformly said that having a different doctor for delivery was "not a problem, " more important to them was the continuing relationship pre and post term with Clinica case managers and nurses.

Patients confirmed that there was communication among CSV sites through records transfer, referrals for services, and discussions among case managers and programs. They also confirmed that there were multiple intakes/assessments across programs.

III. Characterizing Service Integration at CSV

The overall philosophy of integrating services at **CSV** appears to involve:

- Bringing under the CSV corporate umbrella as many grants/resources as possible to fund services appropriate to their populations.

- Assigning patients to special population programs and to case managers based on a hierarchy of needs and availability of resources at the time the patient enters the system (e.g., if a client is pregnant and homeless, she will enter the CPCP program and the case manager will assist with housing).

- Relying on informal networks among staff to assure coordination for individual patients.

- Assigning staff to multiple programs and sites for cross-program/site integration, and

- Using resource staff at specialty programs for all sites (e.g., HCH for homeless assistance issues; physician specializing in infectious disease on staff at HIV program for monitoring HIV/AIDS progression).

Great Brook Valley Health Center (GBVHC) -- Worcester, MA[1]

Originally located in apartments of a public housing development, GBVHC recently financed and moved to a newly constructed free-standing primary care center. Some outreach and community-oriented services (e.g., health education) continue to be located within the public housing complex. GBVHC provides "one-stop" health care, encompassing medical, dental, mental health, innovative acupuncture detox for alcoholism and drugs, pharmacy and laboratory services. GBVHC staff work closely with and rotate through collaborating sites such as community-based drug treatment and local corrections facilities to provide primary care. GBVHC also operates one school-based clinic. Managed care has considerable presence within the Worcester community; GBVHC has Medicaid managed care contracts through the Neighborhood Health Plan and Primary Care Clinician Program.

Special Population Grants

The GBVHC receives the following BPHC grants:

- Community Health Centers (330)
- Public Housing Primary Care (PHPC)
- Comprehensive Perinatal Care Program (CPCP)

BPHC grants accounted for 15% of the total agency revenues of $6.8 million in 1995. The Section 340(a) grant provided 100% of the financial support for their public housing activities. GBVHC also receives BPHC funds as a sub-contractor to another grantee. The HIV program had total revenue of $666,352, 21% of which is Ryan White Title IIIb funds received through sub-contract. They received a small amount ($6,607) through a sub-contract with the HCH agency in the area. GBVHC receives another $64,752 from other federal grants, while state, local and private grants provided another $1.6 million of support. Medicaid revenues accounted for 26 % of total revenues.

Within the ever more competitive managed care environment, GBVHC has sought to align itself with a variety of plans since it entered into the market in 1986, and a substantial number of users are enrolled in managed care. GBVHC is a participant in Medicaid managed care, through contracts with Neighborhood Health Plan (NHP) and the Primary Care Clinician Program. Since 1992, GBVHC has lost ground in the number of NHP clients it serves in the increasingly competitive Medicaid managed care market, and it has a disproportionately large number of monolingual clients (86% of those assigned to GBVHC v. 30% of the overall plan) as other providers have sought managed care clients.

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[1]The site visit team (Marilyn Falik, Cheryl Ulmer and Dr. Tanya Pagan Raggio) visited the Great Brook Valley Health Center (GBVHC) on March 28 and 29, 1996.

I. Programmatic Integration

Organization

GBVHC is a single site operation that has an established reputation, conducts extensive outreach into the community and collaborates in partnerships with other community agencies (drug abuse treatment and corrections) to provide off-site primary care. There are no separate special population programs; GBVHC treats HIV as a primary care disease. Administratively, the Health Center has departments for Medical, Dental, Mental Health, External Programs (e.g., outreach - street and community, home-based education, collaborative community-based partnerships), Patient Support Systems (e.g., case management, other enabling services), Finance, and Facility. Patients can enter directly into care at GBVHC through the "medical door, " or through other departments, including the dental, external outreach, or mental health "doors. " Regardless of the port of entry, clients receive a risk assessment to assist in channeling the patient for the appropriate complement of preventive, primary and more specialized services (e.g., perinatal, HIV care). GBVHC seeks to bring on-site referral and specialty services (e.g., optometry, mental health, substance abuse treatment) to facilitate access, timely follow-up and continuity of care. Within the emergent managed care environment, one-stop care is especially important. This one-stop approach also begins to redress the community's less than adequate transportation system.

GBVHC emphasizes a culturally sensitive, client-centered, and family-based comprehensive care strategy. Bilingual and bicultural services are integral, with 70 percent of GBVHC staff being bilingual/bicultural. GBVHC offers a Family Practice model; all family members may be seen by one Family Practice physician/team; patient's medical charts are cross-referenced and filed by family. GBVHC seeks out men within these families and within the community. Women and children are more likely to be covered by Medicaid, leaving the community's low-income, most vulnerable men without coverage and usually without convenient access to care.

Management and Financial Systems

At registration, clients receive a unique identifier. Reflecting GBVHC philosophy of family-centered care, part of the identification number identifies the family and part the individual patient (e.g., permits appointment coordination and facilitates family-oriented case management).

GBVHC has four parallel data systems. The HIS components are Q and A (clinical tracking), JSI (billing), External Program Database (e.g., household assessments, HIV outreach) and Pharmacy. Since a patient has a single unique identifier, across these files, it is theoretically possible to link records. Staff have tried to download the clinical information from the billing records and merge other data for building an electronic medical record, but thus far have been unsuccessful. However, for discrete conditions, such as asthma and pregnancy, manual data

manipulation has yielded impact analyses for asthma patients participating in an intensive chronic care education and case management program. Managed care plan data indicate reductions in emergency room visits and hospital admissions for patients in the asthma program.

There are regular meetings of clinical, case management, outreach, and MIS staff to facilitate timely feedback as well as consultation on data collection efforts, analyses and implications. The GBVHC data systems provide reports on user demographics and utilization by department (medical, dental and selected services such as case management). In addition, GBVHC has invested in developing capabilities to collect, organize and analyze clinical, outcome-oriented data. For example, client risk assessment data have a dual purpose: first, to develop individual care treatment and monitoring plans, and secondly, to profile users for periodic re-examination of programs and services, and thus, provide an empirical basis for redesigning or augmenting the service continuum or clinical protocols.

With its patient/client unique identifier system, GBVHC can obtain an unduplicated count of users/patients and families. However, for categorical program reporting requirements, various methods are used to obtain categorical-specific user counts. Each of the categorical programs offers a targeted, specific set of services. PHPC users/clients are those who received at least one PHPC-funded service over the reporting period. To arrive at counts for the Ryan White program, authorized staff use the clinical database to identify the number of HIV- positive clients (clients who are HIV-positive have a protected identifier in the clinical system). Reporting on special populations is quite laborious; GBVHC has various Federal, state and private funds, with over 18 different funding sources for special populations, each with separate, distinct requirements (operations and reporting).

II. Coordination of Care for Individual Patients in Multiple Programs

Categorical grant programs are viewed as providing essential funds for supporting the core primary care program and critical enabling services for the community's low-income, vulnerable and multi-risk populations. A significant complement of the staff are bilingual, bicultural; clinical staff and social workers play key roles in case management; outreach staff work with other community-based organizations to facilitate access and care coordination across primary care and specialized care providers.

GBVHC attributes its success in keeping down hospitalization and ER visits (most recently documented for the asthma program) to: (1) emphasis on preventive services; **(2)** full-complement of urgent care services, more characteristic of emergency rooms; and (3) intensive case management with persistent follow-up for non-compliant patients.

GBVHC has established various formal and informal mechanisms for coordinating care, including routine risk assessments, referrals tracking/follow-up, clinical protocols for specific

conditions, **(e . g . ,** asthma), appointments tracking/follow-up, assignment of case managers and case conferencing. Two key features encompass:

Intake/Assessment. At registration, all clients go through a general intake screening covering a few targeted questions: Are you in a harmful relationship? Do you smoke? When was your last menstrual period? Two bilingual RNs with graduate level training have responsibility for triaging patients and prioritizing needs. The triage nurse reviews a comprehensive problem list and checks status of prevention measures. Based on client attributes/risks, referral to perinatal, HIV or substance abuse case managers follows, and these case managers are responsible for conducting more detailed risk assessments and preparing a care plan pertinent to the client's problem(s).

GBVHC is in the process of developing an Office Visit Planning System to triage and track patients' acute problems and unmet needs (adapting Indian Health Service protocols). Triaging will be oriented towards patients with more complex medical needs who tend to access health care as unscheduled patients (urgent care). Approximately, 3040% of patient care visits at GBVHC are urgent care -- unscheduled visits. The intake procedures will provide on-the-spot risk assessments for urgent care clients as well as a checklist to identify gaps in preventive care (e.g., immunizations, Pap test, mammography) for health problems beyond their chief complaint.

Multi-disciplinary Teams/Case Conferencing. Generally, the Family Practice physicians work in a team with either a Nurse Practitioner or Physician Assistant. Assigning dedicated nurses to these teams has been difficult because some of the doctors are not full time. Discussions have begun regarding assignment of specific mental health personnel and social work staff to each team; however, some of the mental health specialists have individualized expertise in substance abuse, domestic violence or child abuse issues that are needed across the Family Practice teams. Case conferences occur frequently -- formally and informally. For example, the OB coordinator, perinatal social worker, nutritionist, HIV counselor, and data specialist meet regularly to discuss individual care (plans and progress) and the type of data that would be useful to track individual patient outcomes, and plan program improvements.

Eventually, the goal is to designate two multi-disciplinary teams, with each team having its own panel of patients to assure care continuity. Clients currently access services based on the initial triage nurse's risk assessment and periodic re-evaluation by the patient's primary provider and case manager.

Assignment to Case Manager. One person acts as the primary case manager. In the hierarchy of case management, if a client is pregnant and HIV-positive, she is assigned to a perinatal case manager. Other HIV-positive patients are assigned to HIV case management. GBVHC offers specialized case management; some manage disease specific conditions (diabetes, HIV, asthma) and some relate to specific social conditions (homelessness). These specialized case managers also serve as in-house consultants in their area of expertise. Staff have given consideration to having a "multi-risk" case manager.

Medical Records

The medical record contains the client's complete medical history and referral records as well as notes on each social service and case management encounter. Separate files contain more detailed social service records and case management records. The client's unique identifier can be found on all records to permit linking of records and cross-checking information.

Patient Discussion Group

The discussion group included patients who had used prenatal, HIV, substance abuse, and mental health services, as well as primary care services. The dominant theme was the value and importance of culturally sensitive and accessible care.

- ***Comprehensive Services.*** Patients were especially pleased with the full constellation of primary care and enabling services and their accessibility at a single location. Patients mentioned specific instances of help for various problems--housing, coping with HIV, and substance abuse.

- ***Case Management.*** Two women who were preeclamptic with their first non-GBVHC pregnancy attributed the good outcomes for second babies to the excellent GBVHC medical and social services. Although the perinatal clients appreciated the efforts of the physicians and nurse practitioners, the case managers were regarded as most valuable and providing ongoing support through both the clinic and hospital systems.

- ***Urgent Care.*** Many patients acknowledged the importance of GBVHC's urgent care.

- ***Bilingual Services.*** Bilingual services were viewed as very valuable. Hispanics/Latinos stated that they were afraid to go to the hospital. They appreciated the ability to access care earlier and more consistently at GBVHC.

- ***Child Care Services.*** The parents acknowledged that on-site day care eased and enhanced access and facilitated timely, scheduled care. (Staff indicated that since child care became available no-show rates for perinatal care decreased dramatically from 48% to 8%.)

- *Off-Site Linkages.* The GBVHC linkages with the local jail and the area substance abuse treatment providers were instrumental in getting commumty residents into care and encouraging care continuity, across primary care and behavioral services.

- ***Gaps.*** Transportation, however, continues to be a problem.

The group participants were not aware of the various funding sources for specific services. They were, however, aware of the Medicaid managed care plans.

III. Characterizing Service Integration at GBVHC

As the only primary care organization in the neighborhood, GBVHC strives to develop a full range of services at a single site with emphasis on care and service capacity rather than separate (categorical) programs. The overall approach to service integration involves:

- Developing a risk assessment system that identifies risks and health concerns warranting attention beyond the presenting complaint/condition. This new system will assess risks among the sizeable urgent (no appointment) care population.
- Maximizing the contribution of each staff person via defined job descriptions, protocols for referral, and in-service education.
- Coordinating care through multidisciplinary teams across medical, substance abuse and mental health departments, with a significant role for case managers.
- Formalizing interdepartmental referrals and timely entry of data from computerized referral form (same day entry) which puts the burden on the system to respond, not a single case manager.
- Emphasizing outreach to bring clients into care system for preventive care and persistent follow-up with clients (less than 30% of clients have phones).
- Leveraging as many grants and resources as possible to fund services that are an extension of the basic primary care supported by the 330 grant.
- Providing various services on-site (one-stop approach), including mental health, substance abuse and other specialty care.
- Participating in external task forces to facilitate client access, garner additional services, and provide training opportunities with other community-based service organizations and providers.
- Establishing collaborative off-site primary care services with other organizations and developing cross-staffing opportunities between GBVHC and these organizations. Collaborative, joint services assist in promoting access, notably substance abuse treatment and housing.

- Developing MIS capabilities that will permit improved problem identification, care monitoring and performance measurement.

Implementation of Medicaid managed care has caused dislocations in care continuity because assignment was based on geography rather than established patient-provider relationships. Many Medicaid eligibles did not respond to the mailed, English only Medicaid enrollment form. The GBVHC population often does not have stable residences, and 30-40% are monolingual Hispanics.

Maricopa County Department of Public Health and Maricopa County Health System -- Phoenix, AZ'

The special population programs in Maricopa County are operated by the Maricopa County Department of Public Health and Maricopa County Health System. Both organizations are responsible for distinct categorical, special population programs:

- Maricopa County Department of Public Health is responsible for the operation of (1) the Health Care for the Homeless (HCH) Program and (2) the Linkage - Primary Care/Substance Abuse Treatment Program (integration of primary care and substance abuse treatment services).

- Maricopa County Health System encompasses 15 publicly supported primary care clinics, with the McDowell Healthcare Center serving as the area's principal source of primary care and related services for HIV-positive persons and those with AIDS (covering Maricopa and neighboring Pinal counties). The Maricopa County Health System also oversees the Maricopa Medical Center (Maricopa County's public hospital) and the Maricopa Health Plan (the county-run HMO).

Special Population Grants

Maricopa County receives the following BPHC grants:

- Health Care for the Homeless (340)
- Ryan White Title IIIb (HIV)
- Linkage - Primary Care/Substance Abuse Treatment

Special population programs are operated by two distinct county entities -- the Health Care for the Homeless and the Linkage programs are both operated by the Maricopa County Department of Public Health. The McDowell Healthcare Clinic, operated by the Maricopa County Health System, provides primary care and related services to HIV-positive persons.

The Department of Public Health received both the Section 340 ($1.8 million) and the Linkage - Primary Care/Substance Abuse Treatment ($567,283) grants in 1995. Both programs relied heavily on BPHC grants. The Section 340 grant accounted for 67% of the total revenues for the Health Care for the Homeless program, while the Linkage program relied exclusively on the BPHC grant for financial support. The Health Care for the Homeless Program was also supported by $50,000 in state and local grants.

'**The** site visit team (Marilyn Falik, Pete Stoessel and Dr. Tanya Pagan Raggio) visited Maricopa County Department of Public Health and Maricopa County Health System on May 9 and 10, 1996.

Capitated Medicaid payments, through AHCCCS (Arizona Health Care Cost Containment System), made up about 7 % of the total revenues for Health Care for the Homeless. The Linkage program received no revenue from AHCCCS. The Linkage program was used by individuals who are not eligible for substance abuse treatment through the AHCCCS behavioral health program (COMCARE).

Maricopa County Health System's HIV program is operated from the McDowell Healthcare Center is the direct recipient of Ryan White Title IIIb funds in the amount of $1.02 million. These funds accounted for nearly 50% of the total program revenue in the fiscal year ending June 30, 1996. Activities at McDowell were also supported by Ryan White Title I; $80,935 in state grants; and $85,000 in capitated payments from AHCCCS and ALTCS (Arizona Long Term Care System).

Maricopa County is very aggressive in its eligibility activities, with on-site eligibility determination and assistance at both HCH Clinic and McDowell. The BPHC grants cover populations who are uninsured and otherwise ineligible for AHCCCS. The McDowell Healthcare Center is taking the lead in developing and implementing a managed care plan targeted to people living with HIV. The HCH program must coordinate with nine health plans under AHCCCS that the homeless may be assigned to or choose to join.

I. Programmatic Integration

Organization

Maricopa County's health care system for special populations is a set of distinct, targeted programs. This linear model of several programs/clinics provides primary care and related services to targeted populations. Integration is achieved principally through their respective case management activities and collaborative case management efforts (e.g., scheduled cross-program case conferences). As stated earlier, two county agencies administer three special population programs that remain reasonably autonomous.

- ***The McDowell Healthcare Center.*** This Early Intervention Program is the principal provider of primary care for HIV-positive persons and those with AIDS. McDowell collaborates with various local agencies and specialized providers to offer, coordinate and facilitate access to a continuum of essential services, including primary care (McDowell), participation in clinical trials (Phoenix Body Positive and the Maricopa Medical Center), behavioral services and case management (principally through HIV Care Directions of Phoenix). McDowell recently expanded capacity by moving into a larger clinic, with additional exam rooms, offices for social workers and separate areas for HIV counseling and testing.

- ***Health Care for the Homeless Program.*** Homeless persons receive primary care, case management and referral services through the HCH Clinic, located next door to a large shelter. The HCH Outreach Program relies on case managers who work within the community, providing "street" services, linking homeless to the HCH clinic and other local agencies. The HCH Clinic provides primary care and referrals, serving homeless shelter residents and "street folk" (e.g., residing near the river). HCH case managers seek to provide extensive outreach as well as intensive support services.

- ***Linkage Program.*** This program focuses on serving substance abusers and their families, providing services directly (e.g., case management) and coordinating referrals for specific services via a network of Linkage partners and local agencies. Program case managers work with HCH and McDowell clients, focusing on behavioral services, substance abuse treatment, mental health and counseling. Case managers connect clients to a variety of rehabilitation, detox, and primary care facilities, including the Local Alcohol Reception Center (LARC), 7th Avenue Primary Care Center, and Southwest Behavioral. [This Linkage Program is currently in the last year of its demonstration funding cycle. Maricopa County is submitting an application for a SPINS grant to continue its substance abuse and primary care linkages program.]

Management and Financial Systems

Maricopa County serves as one example of a mature public health-managed care system. The Maricopa Health System also offers of preview of the scope and direction of change under competitive managed care scenarios. Since 1982, Maricopa County "Medicaid eligibles" have been enrolling in managed care plans, including HMOs within an array of public and private, for-profit and non-profit plans. Concurrently, Maricopa County has been an operational public HMO, Maricopa Health Plan; peak enrollments exceeded 50,000; now are down to 27,000 enrollees.

As Maricopa Health Plan is one of ten area plans, heightened competition cut into its market share over the past three years. Privatization will occur. The sole public HMO, Maricopa Health Plan, will be privatized as of July 1996. The Maricopa Medical Center, the county's only public hospital, is part of the privatization package; McDowell's privatization status was not determined at time of site visit.

AHCCCS funds remain important. The county's Medical Assistance Program is responsible for screening, reviewing and determining eligibility as well as enrollment. Maricopa County and its special population programs have been quite aggressive in seeking if not securing enrollment for eligibles. Mainstream AHCCCS plans, however, do not necessarily offer outreach and enabling services so important for special populations.

Maricopa County as other Arizona counties has "residual liability, " and thus is responsible for financing and delivering care to the uninsured. As such AHCCCS is a major source of funds for special populations who are otherwise eligible. The county's residual liability for the uninsured, commencing May 1996, will be financed, at least in part, by an new tobacco tax. As the homeless tend to be uninsured, it is anticipated that the tobacco tax will assist in financing HCH Clinic services.

The separate categorical funding streams have largely translated into a linear program model. Each of these three special population programs operates as comparatively discrete entity, with case managers providing the patient care and collaborative linkages for coordinating care.

Management Information System (MIS)

Currently, each of the programs operates and manages its own MIS. The current DPH local area network (Honeywell System) has been operational for 6-7 months. Maricopa County Department of Public Health is in the process of developing specifications for and seeking bids to implement a new, more sophisticated MIS. This new system will be designed to accommodate both public health programs (e.g., tracking immunizations) and direct care as provided by the HCH program.

Limiting the integrative potential of the current system is the fact that McDowell, HCH Clinic and Linkage programs maintain separate charts, with each assigning program specific patient identifiers. It is possible for an individual, who at one time or another accessed all three of the programs, to have three separate patient identification numbers and certainly different medical records in each of the three care sites. Data systems are currently not in place to allow for coordination of patient services across clinics and special populations programs. If patient information is requested, responses are in the form of hard-copy transfers or medical record extracts. The Maricopa Health Plan has the most complete set of utilization records, but only for enrollees. When eligibility status changes, it is impossible to track longitudinally.

These three categorical, special population programs have rather rudimentary MIS capabilities. For example, until recently, the HCH MIS separated clinic and outreach services. While the current HCH MIS is not linked with the county system (i.e., cannot follow clients across programs or when admitted to the Maricopa Medical Center), it is capable of: (1) aggregating client-level medical and outreach encounter data (Paradox database) for analysis (e.g., calculate provider productivity levels); and (2) linking client demographic data. Patient MIS record information is updated about once a year. "Inactive" records (no visits, no encounters) are purged after two-years.

Arizona has very strict confidentiality regulations. Patients must sign releases to permit transfer of medical records information. This release specifies both time frame (e.g., 6-months) and to whom records may be given. (Concerns about confidentiality, and restrictions on access, review and sharing of medical records precluded site visit review of medical records).

II. Coordination of Care for Individual Patients in Multiple Program

Since the programs in Maricopa County operate as rather discrete entities for specifically defined, categorical populations, case managers are the integrators for cross-program multi-risk clients.

- Designation of a primary case manager is based on an intake needs assessment. This needs assessment also guides the care plan. The primary case manager works collaboratively, albeit informally, with other case managers in other programs and organizations.

- HIV-positive clients at the HCH Clinic are likely to be referred to the McDowell Healthcare Center, especially as more specialized care is necessary. HCH referrals are also likely for specialized HIV counseling, other support services and clinical trials. HCH case managers might, however, continue to assist HIV-positive persons in making and keeping critical appointments, complying with regimen for prescription medications, and assisting them with housing and solving other related problems.

- The Maricopa County Linkage Program is a case management program for a designated population of substance abusers, including those who are at risk for HIV infection (intravenous drug users), and their families. Bi-weekly case conferences at various network treatment sites foster collaboration and care coordination.

Patient Discussion Group

The discussion group participants consisted primarily of HCH individuals. Each indicated that he/she did not have access to any health care before coming to the HCH Clinic. Outreach was the impetus for learning about and taking advantage of the HCH Clinic's services. The outreach/case management team was referred to as a "lifeline. " On more than one occasion, participants stated a HCH intervention saved his/her life (e.g., surgery, dialysis program, psychiatric counseling, medications). The case managers also provided assistance in obtaining housing, temporary shelter, social services, AHCCCS enrollment, and other referrals (e.g., child welfare, legal aid). Importantly, case managers were viewed as persistent and as

"friends" when most in need of encouragement and friendship. The HCH case managers were viewed very favorably, in contrast to the shelter case managers. Duplicative case management was not viewed as a problem; in fact, more than one case manager was viewed as improving changes of obtaining desired services.

III. Characterizing Service Integration at Maricopa County

The two county agencies with responsibility for the special populations programs, the Maricopa County Health System (McDowell Healthcare Center) and the Maricopa County Department of Public Health (Health Care for the Homeless and Maricopa County Linkage programs) operate as parallel organizations serving distinct populations. The process for "turning over persons" and coordinating care between the two branches of the county government is made more difficult because the two agencies operate independently of each other (i.e., separate sites, separate information systems). Also, patient data from the McDowell Healthcare Center is difficult to obtain or share -- strict confidentiality requirements limit access to patient records of HIV-positive persons. To a considerable extent, both programs (McDowell-HIV and HCH clinic) refer and cross refer with the Maricopa County Linkage Program, as both populations experience behavioral problems, addictions (alcohol, illicit drugs) and psychological disorders (e.g., dually diagnosed). It is estimated that 80% of the homeless persons suffer from substance abuse problems, and most new HIV cases are intravenous drug users.

Service integration relies on case managers' knowledge of local resources and sister agencies. Intake and screening procedures contain aggressive AHCCCS and ALTCS (long term care program for the elderly and disabled) enrollment procedures (ALTCS offers higher capitation rates and is an especially attractive source of revenues). Primary care providers and case managers tend to rely on both formal and informal referral networks.

The major concerns and access barriers for multi-risk clients were:

- lack of mental health services, especially for AHCCCS patients (only one area provider with limited capacity and restrictive criteria);
- inadequate transportation;
- lack of suitable housing for low-income populations and HIV-positive persons; and
- challenges of melding categorical grant dollars to maximize capacity to serve multi-risk populations. Increasingly, categorical grant programs are narrowing rather widening their eligibility criteria.

Multnomah County Health Department (MCHD) -- Portland, OR[1]

The health department provides primary and speciality care to the underserved populations of the county through a system of 8 primary care clinics, specialty (e.g., TB, STD and HIV) and school based clinics, and a referral network consisting of state and local organizations.

Special Population Grants

The Multnomah County Health Department receives the following grants from the BPHC:

- Community Health Centers (330)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Health Care for the Homeless - Children (340s)
- Ryan White Title IIIb (HIV)
- Linkage - Primary Care/Substance Abuse Treatment

BPHC grants accounted for nearly 7% of the total health department revenues ($5.5 million out of $81 million) for the fiscal year ending June 30, 1995. The Health Care for the Homeless grants (340 and 340s) provided over half the support for the homeless programs. Over one-third of the support for the HIV program was provided by the Ryan White Title IIIb grant. The HIV program also received funding through Ryan White Title II, and the Centers for Disease Control and Prevention. The federal grant provided 56% of the total revenue for the ADAPT (perinatal) program, and the Linkage-Primary Care/Substance Abuse Treatment Program received over 75 % of its total revenue from the federal grant.

Multnomah County Health Department received other federal grants in the amount of $5.9 million. State, local and private grants provided a combined $26.1 million of support -- $23 million of which is derived from the County General Fund. Medicaid payments (through CareOregon) totalled $39,156,258 -- almost half of the total agency revenues.

The health department has been in a managed care arrangement with the state since Oregon received an 1115 waiver in 1988 resulting in the birth of the Oregon Health Plan. In 1994, MCHD joined with Oregon Health Sciences University and the Oregon Primary Care Association to become a statewide health care plan (CareOregon) and HMO. Almost all of the 330/329 agencies in the state are part of CareOregon.

[1]The site visit team (Cheryl Ulmer, Pete Stoessel and Dr.Tanya Pagan Raggio) visited the Multnomah County Health Department on April 2 and 3, 1996.

I. Programmatic Integration

Organization

The county no longer has a public hospital. Ambulatory care, typically provided by a public hospital out-patient department, is provided by the health department through a system of 8 primary care sites. Emergency room services are available from a variety of hospitals, including Oregon Health Sciences University hospital.

The health department has a wide array of traditional primary care, public health surveillance and immunization activities, but also provides comprehensive primary care services with some on-site specialty services, and referral programs for other specialities. Special population programs provide care at stand-alone primary care clinics throughout the county:

- Located in an area frequented by the city's homeless, The Burnside Health Center is funded by 340 dollars and directs services to the homeless population.

- La Clinica de Buena Salud, funded by 340s monies, is located at a Portland subsidized housing complex with a large Hispanic population who have settled out of the migrant stream. This program provides health care to potentially homeless Hispanic children and their immediate families.

- The HIV treatment clinic is located on the fourth floor of the Stark Building. The Stark Building also houses the Westside Health Center. The HIV clinic provides primary care, specialty services and case management to HIV-positive individuals. The decision to have a separate HIV clinic stemmed from: (1) HIV clients wanted to ensure providers were highly specialized and competent in dealing with HIV and related issues; (2) added assurance of privacy and confidentiality; and (3) space limitations.

- The CPCP program (Assertive Drug Alcohol Pregnancy Transition -- ADAPT) is run in conjunction with the Department of Corrections. Field community health nurses make initial contacts with pregnant clients in a correctional setting, and provide follow- up care and coordination for substance abuse treatment and family services upon release.

- The Linkage - Primary Care/Substance Abuse Treatment program provides case management, referrals and primary care services to 204 substance abusing individuals. The program is now located within the Northeast Health Center and seeks to reach substance abusers at an earlier stage. Previously, the program had out-stationed primary care providers at substance abuse treatment sites, but staff found they were under-utilized.

Management and Financial Systems

The Multnomah County Health Department has a mainframe based system with PC terminals in 22 health care delivery sites including the 8 main primary care clinics. The system has cost almost $2.2 million in development and $500,000 annually to maintain and update. This Health Information System (HIS) is only a few years old; it is designed to be more flexible and responsive to the health department's needs than was the earlier system run by the county government. The system mainframe is based at the Oregon Health Sciences University medical school with which the health department shares software. Each clinic can access information from the main hospital site as well as from other clinics throughout the system.

The HIS can separately count users of each grant supported program; however, the definition of user and how to query to the information system varies among programs. Users might be defined by site for one grant program or by condition for another. The HIS can generate required BPHC reports, and has been updated to meet UDS requirements. To run encounter totals, specific types of encounters are tagged as qualifying under BCRR/UDS rules for the primary care sites. Each encounter can be distinguished by site, type of visit (medical, dental, field nursing, optometry), provider number, and services provided, as well as by associated client data.

Multnomah has the infrastructure in place for a strong billing system; the HIS has a billing module. Self-pay patients receive receipts/bills directly; managed care patients receive a copy or receipt of charges with notation that "this is not a bill." There is monthly electronic batch billing for Medicaid and Medicare. A client statement displays a receipt tracking number, service received, maximum charge, percentage discount, client payment/previous balance, discounted fee, and insurance billing/balance. The system can track size and age of balances, but bills are rarely mailed.

The county general ledger financial system (GLFS) is separate from the Health Department's MIS. The Health Department's Health Information System produces revenue data while the GLFS tracks expenditures; the interface between the two systems is manual. Since the county system does not support an accounts receivables package and its revenue component is rigid, revenue reporting for year end reports must be customized.

II. Coordination of Care for Individual Patients in Multiple Programs

Multnomah County Health Department's system of care is designed to provide primary and speciality care to all individuals in a variety of settings.

Intake/Assessment. Upon the initial encounter with the health department, the client is issued a patient identifier. This identifier follows the patient through all programs and phases of care within the health department system. Repeat users of the health department system have their

charts kept at the location of primary use. Should a client seek care at a different location, the location of the patient record can be identified using the patient identifier. Vital medical information is frequently faxed from one location to another to "catch up" with transient patients. If the client continues to utilize a "new" site for care, the entire record is transferred to the new location.

Multi-Disciplinary Teams/Conferencing. Each site has a different way of organizing is clinical team. One of the interesting aspects of the clinical staff are the high numbers with mental health training. Conferencing is done on both a formal and informal basis. One area where there may be duplication of case management services is if a client is HIV-positive and also substance abusing or homeless. These are areas where a client is more likely to get case management. To try to avoid duplication of services, the case managers from the HIV and homeless programs hold joint bi-monthly meetings.

Assignment to Case Manager. Case management is available to primary care patients, but it is not as intensive as the case management provided to patients in the special populations programs. Services are primarily intended to "link" clients with services in the health department system, and with other state and local entities. Patients in homeless, HIV and CPCP programs receive the most intensive case management. The CPCP ***program (ADAPT)*** primarily targets at-risk pregnant women engaged in the county correctional system, and does not guarantee case management services to all prenatal patients outside of the ADAPT program.

Program Enrollment and Assignment to Primary Provider. The health department provides primary care at 8 clinics in Multnomah County. Although special populations programs are located at distinct sites, clients can access services at any health department facility. Patients can self refer to special population sites or be referred by providers at other sites. Referrals to other special programs are not always accepted by the client. Individual clients sometimes are hesitant to continue care because of: (1) transportation issues; (2) language barriers; (3) they like receiving all of their primary care and speciality services in one site; and (4) (in the case of transferring to the HIV clinic) they do not wish their condition to be identified by going to a specific site.

Persons enrolled in the CareOregon plan have the option of choosing their own primary care physician. The primary care physician is responsible for the clinical case management component of patient care. The physician evaluates the needs of the patient, and can refer the patient to other services (i.e., case management, HIV Clinic, homeless services) available within the health department system. The health department ***is*** considering changing its registration on the information system to require all incoming patients to choose or be assigned a primary care provider, even if they are not in managed care.

Medical Records

Medical records, service records, and case management histories appear in a single patient record. Status of individuals receiving enabling services (e.g., social support, transportation assistance, WIC, etc.) is documented, including the confiiation of receipt of such services.

Community health, and field nursing records, however, are kept separate until case closure. Patient records are housed at a single location -- the center providing the most care for the client. The location of the patient record can be determined by querying the information system using the patient identifier.

Patient Discussion Group

The group included clients from the ADAPT program, the homeless clinics of the Burnside Health Center and La Clinica de Buena Salud, and the HIV program at the Westside Health Center. The intensive case management services (provided by the field nursing teams), the referral network maintained by the health department, and the availability of health insurance coverage through the Oregon Health Plan were the most frequently identified aspects. Other areas addressed included:

- ***Limited hours of operation at La Clinica de Buena Salud.*** Clients from the Health Care for the Homeless Children program were pleased with the clinical and case management services offered by the bilingual staff of this clinic. Their only lament was that the site is only operational for two days a week. For many residents of the complex, the clinic is their only source of health care.

- ***Case management in the ADAPT program.*** Overall, clients in the ADAPT program were very pleased with the case management and coordination of services offered through this effort. Parenting education, and well-child visits were cited as being extremely beneficial. Many of the ADAPT clients credited the program with giving them the assistance they needed to turn around their lives, and expressed disappointment about having to leave the program after an 18 month period.

- ***Access to the Burnside Health Center.*** Two consumer representatives from the Community Health Council were concerned about access to the program due to the on-going renovation of downtown Portland. Many of the homeless are forced to leave the area as the city becomes "rehabilitated, " and these displaced individuals lose access to their primary source of health care. The health department is discussing transferring the program from the Burnside Center (with a ground floor "store front" entrance") to the Stark Building (a high-rise county building housing the Westside Health Center). Council members expressed skepticism over whether homeless persons would access services in the "high-rise" county building.

- The focus group participants were not averse to paying a premium to maintain eligibility for the Oregon Health Plan. In fact, most preferred a premium over a co-payment because a premium could be budgeted. In addition, participants appeared to be aware of the cost of treatment. For instance, one woman who received AZT for free knew the cost of the drug; another knew the cost of her hospital stay.

III. Characterizing Service Integration at Multnomah County Health Department

The service delivery model for special population programs separates identified special populations into specialized care arrangements based on geography and service needs. Specialized programs for the homeless, HIV-positive individuals, and pregnant incarcerated women are provided at separate, distinct locations. However, clients with categorical characteristics are seen across all sites.

- Although the special programs are located and operated as separate sites, the health department staff are allocated across programs and sites.

- Cross-staffing of personnel from primary care to specialty sites enhances MCHD's ability to integrate effectively services for special populations. For example, the medical director of the health care for the homeless program is also the medical director for a non-health department substance abuse treatment site.

- Team conferencing takes place as needed. For example, the mental health team is actively involved with the members of the prenatal team, and frequent meetings are held between case managers in the substance abuse and homeless programs.

- The health department utilizes a single record system and a single patient identifier. In addition, CareOregon is allowing patients to select a primary care provider.

Other characteristics, including staff structure at the MCHD, facilitate the linking of primary care and case management services:

- The health department's commitment to include mental health services in their delivery system is exemplified by the number of staff psychiatric nurse practitioners and social workers.

- Clients typically not accustomed to utilizing an appointment system to access care, appear to accept the health department's approach of scheduling appointments.

- The health department actively monitors the progress of certain clients through the activities of field nursing teams. These teams insure clients receive the post-encounter care that is necessary for high-risk patients.

- Because the programs in the health department are operating at maximum capacity, outreach services are not emphasized.

The staff is also actively involved in re-education programs and "cross-training" across disciplines. Each month, there are three hour provider meetings. At the meetings, external training is offered, and administrative issues are discussed. Topics for staff education offered during these meetings include: TB Screening and Management in Prenatal Care, Adolescent Case Conferencing and Literature Review, Lab Issues, and Common Eye Problems in Children.

Issues related to the managed care environment in Oregon, and federal audit procedures, were mentioned frequently by the agency.

- The health department's perception is that CareOregon experiences adverse selection, compared to the other 12 managed care plans in the Oregon Health Plan. Because the health department is known for high quality HIV care, persons with more advanced cases of HIV seek treatment through health department programs. In addition, the CareOregon enrolled population appears to MCHD to be a more acutely ill population than populations enrolled in other plans. To date, the state has not shared its assumptions on acuity or case mix for the capitation rate.

- The populations served by the health department are not always responsive to the administrative requirements of maintaining enrollment in a managed care plan. The managed care system, as it exists in Oregon, requires persons in arrears for premium or co-payment to be denied eligibility for the Oregon Health Plan. Homeless persons, as well as other multi-risk patients tend to: 1) cycle in and out of the system; 2) do not remain current with premium payments; and 3) lack the resources to provide a co-payment when receiving treatment" Treatment provided by the health department to those persons lacking eligibility and resources is often uncompensated.

- Circular A87 requires county health departments to allocate time and effort for each grant. This laborious requirement is made more difficult when complex clients access, and employees serve multiple programs. The finance director noted with concern repeated audit findings that documentation was incomplete.

William F. Ryan Community Health Center -- New York, NY'

Located in Manhattan, the Ryan Center is the nexus of an elaborate system of care delivery, consisting of one primary care location, five primary care clinics in homeless shelters, three school based clinics, and an array of community outreach programs, all designed to provide accessible health care to underserved populations.

Special Population Grants

The Ryan Community Health Center receives the following grants from the BPHC:

- Community Health Centers (330)
- Comprehensive Perinatal Care Program (CPCP)
- Health Care for the Homeless (340)
- Ryan White Title IIIb (HIV)

BPHC dollars accounted for nearly 23 % of 1995 total agency revenues of $16.7 million. The Health Care for the Homeless program received one-third of its total funding from the Section 340 grant, while 37% of the funding for HIV services are provided by the Title IIIb grant. The HIV program also received support from Ryan White Titles I and II, and the Centers for Disease Control and Prevention. Half of the revenue for the perinatal program was provided by the CPCP grant.

Contributions in the form of other federal grants was $228,283. State, local and private grants (e.g., New York State Department of Health, New York City Department of Health, and the Robert Wood Johnson Foundation) combined for another $3.2 million in support. Medicaid revenues made up almost half of the total agency revenues, while Medicare contributed another 4%.

In 1988, Ryan created CenterCare, a pre-paid HMO health plan for Medicaid recipients. CenterCare is the only Medicaid managed care plan accepted at Ryan. To enhance its viability in the advent of mandatory Medicaid managed care when competition for Medicaid patients becomes more intense, Ryan has established the Ryan Community Health Network, Inc. as a not-for-profit community based health care system. The Network consists of CenterCare, the Ryan center, an additional health center, and St. Luke's/Roosevelt Hospital.

'The site visit team (Deborah Lewis-Idema, Pete Stoessel and Dr. Tanya Pagan Raggio) visited the Ryan Community Health Center on February 13 and 14, 1996.

I. Programmatic Integration

Organization

The Ryan's 97th Street site is the hub of a system of care designed to provide access to traditionally underserved populations. The primary care clinic and outreach programs operate in an urban setting -- focusing on the area of upper Manhattan, and provide services designed to address health issues dominant in an urban area. Located on 97th Street, the main site provides primary care and specialty services to all populations. Due to space limitations, case management for HIV, and mental health services are provided at another location, on 100th Street. In addition, Ryan operates primary care clinics in five New York City homeless shelters, three area schools, and through an array of mobile outreach programs.

Ryan programs are guided by the Board's philosophy of "treating people, not diseases. " As a result, services to special populations (i.e. HIV-positive, homeless, pregnant women) are integrated with all departments, and practitioners at the center. With the exception of the five shelter based homeless clinics, there are no "stand-alone" clinics to serve specific segments of the population's investigated in this project.

The HIV program provides care for HIV-positive patients at the 97th Street facility, and case management at the 100th Street site. In addition to the primary care and case management functions, Ryan provides on-site pre and post test counseling, and currently has the largest caseload of patients of any free-standing clinic in the state. This program is not a "stand-alone" program within the Ryan system -- HIV-positive persons enter the same "door" as other patients, and all clinical staff are trained in treating HIV-positive persons. Outreach efforts include the SHOUT Van (targets at-risk youths by delivering to them primary care and HIV testing and counseling aboard a mobile clinic) and the AirBridge Network (coordinates continuous case management for HIV-positive persons migrating between New York City and Puerto Rico).

Homeless individuals can receive care at one of the five shelter based clinics, or through the 97th Street site. All sites provide ambulatory primary care, mental health and substance abuse counseling, health education and referrals. In addition to these services, Ryan offers educational and outreach programs, and produces literature in both English and Spanish on such topics as nutrition, prenatal care and chronic illness management. Outreach services to the area's homeless are enhanced by the ACT (Assertive Community Treatment) Program. This mobile program delivers treatment and information to the mentally ill, chemically abusing homeless populations of northern Manhattan.

The recently reinstated CPCP program operates in collaboration with St. Luke's/Roosevelt Hospital to provide perinatal and post partum care for mothers and infants. Deliveries are performed at the hospital, while perinatal, and primary care services are provided at **the 97th** Street site. In addition to the primary care services, Ryan also offers "on-site" educational classes, perinatal counseling, "field trips" to the delivery room, sonograms, and mammography

twice weekly. High risk pregnancies are referred to the St Luke's/Roosevelt genetics clinic and specialty services.

Management and Financial Systems

Ryan compiles data on patients and related revenues/costs through the use of two independent computer systems. The patient system contains demographic and limited clinical data on the individual patient, and also acts as a billing/accounts receivables system. The system can also be queried to produce summary reports based on demographic data, insurance source(s) and other characteristics. The financial system is the "general ledger" of the Ryan CHC. It compiles summaries based on data extracted from the patient system, and provides grant required financial reports, and cumulative financial data. The data needed to produce the financial system's reports are produced in the patient system, and manually input into the financial system. Given the capability of their MIS, Ryan's staff foresees little disruption with complying with the new UDS requirements.

The patient system maintains patient information, including payment and billing data that is updated annually. Each patient in the system is identified by a patient registration number that is assigned to the patient for life, and follows s/he through all programs and encounters at Ryan. These identifiers are based on chart numbers, and patients are assigned the next available number. Patient registration numbers are reserved for off-site clinics and outreach programs (homeless shelters, Shout Van, etc.). All patients, whether enrolling at 97th Street or at an off-site location (e.g. shelter, van) become active in the same patient record system.

Off-site staff contact the Ryan Center on 97th Street to: (1) establish a new patient number (for new clients) and (2) verify an active patient number if one had been assigned during a previous encounter. Every effort is made by the Ryan staff to avoid issuing two different identification numbers to the same client. Following the intake at the shelter/off-site facility, the original patient chart is sent to 97th Street, and a copy (with the patient's new chart number) is sent back to the off-site clinic.

Encounters are registered by another number; an encounter number. Generated by the cashier at the time of discharge, encounter numbers allow Ryan to track the number of encounters of its different programs. These numbers are not patient specific. Using data from encounter forms filled out by practitioners, the patient system is able to "unduplicate" users across programs; track the number of users for each grant supported program; and register the number of encounters by program.

II. Coordination of Care for Individual Patients in Multiple Programs

Ryan's system of care relies primarily on a single patient identifier, a unified patient chart system, and communication and collaboration between the medical and case management staffs of the different departments to integrate care for patients.

Patients are registered at a single intake, where they: (1) are allowed to select a primary care provider; and (2) receive a patient identifier. This unique identifier will follow the patient through all encounters and programs at Ryan. As a result, users of multiple programs can be tracked across sites and programs using this identifier. HIV-positive patients do not receive special patient identifiers -- however, their health status is only accessible to the primary care physician, and specific personnel in the MIS department. Aside from this exception, all patients entering the Ryan system of care receive the same intake and identification protocol.

The medical chart system at Ryan operates as a unified system -- organized to document the treatment of each patient as a whole person, not a categorical entity. Patient charts contain both medical and social/case management information. All charts are kept on-file at the 97th Street site, and copies of charts are maintained at the various off-site locations (e.g., homeless shelters) and outreach vehicles (e.g., SHOUT Van).

A cohesive, integrated staff structure is an integral component of Ryan's successful service delivery implementation. Every effort is made to increase the awareness of the clinical staff on patient flow issues. Weekly meetings between the different departments and providers allow for an exchange of vital information between departments and staff. Regular case conferencing, between providers and case managers, enhances service integration and staff communication.

Staff communication, and integration across programs is exemplified by the CPCP program. Upon referral to the perinatal program, several processes are set in motion. The case manager and patient discuss educational opportunities and available social services within the community. The pediatric practitioners become involved with the patient prior to delivery, familiarizing the expectant mother with the importance of post-birth care for the child. St. Luke's/Roosevelt Hospital also participates in the pre-delivery activities --

- the pregnant women are taken to the hospital to tour the delivery area;
- at 19 weeks, copies of the patient records are forwarded to the hospital; and
- the child is "pre-registered" as a patient at St. Luke's/Roosevelt.

Putient Discussion Group

The patient focus group consisted of individuals representing the homeless and HIV programs. Overall, referral processes and case management activities appeared to be the aspects of the system of care most identified during the session.

- Patients were very pleased with the level of care provided, and appeared to be unaware of the different funding streams financing their care.

- The participants came to Ryan through a variety of sources: one woman had been using the Ryan Center for all her health care for over 30 years; another HIV\positive gentleman heard of Ryan's Air Bridge Project through a television ad.

- Patients were pleased with the staff's efforts in assisting them with establishing eligibility for programs and services.

- Long waits for follow-up appointments, co-payment costs, and a lack of available information on the full scope of services offered at Ryan were among the concerns raised by the participants.

III. Characterizing Service Integration at Ryan

Ryan's approach to delivering care is guided by the principle of treating people, not diseases. Every effort is made to treat all persons as individuals, not categorical entities. As a result, specialized care for HIV-positive, homeless persons and pregnant women is provided at the same location. In order to facilitate this principle, the Ryan Center:

- Aggressively seeks funding from a mix of Federal, state, local, and private entities.

- Creates patient charts containing both clinical and case management information. The unified chart system, coupled with regular meetings between practitioners and case managers of different programs facilitate communication and increase knowledge among the staff.

- Requires primary care and specialty staff to treat patients from all special populations programs.

- Utilizes a single patient identifier as a means to track patients across programs and sites, and through all facets of care at Ryan.

Major issues raised by the agencies focused on reporting requirements and the costs associated with the increase in the number of self pay patients seen at the center.

- Differences in reporting requirements between state and federal grantors are a source of anxiety at Ryan, In many cases, states define services differently than the federal government - adding confusion to an already complicated reporting process. Example: HIV program requirements do not allow Ryan to register affected individuals as system users. As a result, the cost of counseling services needed by families living with HIV/AIDS victims are not covered by the Ryan White grants, and only HIV-positive patients can be registered as users of the system.

- The city is considering unifying the four grants and reports for Title I. The four Title I grants contain different administrative cost caps. Centers allocating resources and staff across grants can encounter serious personnel issues. Integration of the Title I grants also could result in the loss of financial support. In addition, the four Title I grants are not administered by the same Project Officer. MDRC (Manpower Development Resource Center -- NY based organization serving as fiscal agent for the Title I consortium) does not assign the same project director for each of the grants.

- The number of self-pay patients at Ryan increased 11% from last year, and now make up nearly 40% of the total patient load. Last year 70% of the visits to the center requiring specialty services were made by self-pay patients. Financing this care, while losing valuable Medicaid funds to Medicaid managed care, may require Ryan to scale back either services or personnel.

- In order to maximize resources and maintain the integration of services, Ryan found it necessary to "cross-train" several of the administrative personnel. Union rules (Ryan is fully unionized) required all job descriptions be changed as a result of the "cross-training. "

- The privatization of the hospital system will force many of the area's uninsured to seek care elsewhere, specifically at Ryan. Already overburdened with self-pay patients, Ryan will find it difficult to provide adequate services to an increasingly larger uninsured population.

- The advent of Medicaid managed care in New York City requires Ryan to compete for patients to maintain the flow of third party funds. Most of the private providers in the city have large advertising budgets which can be used to attract Medicaid patients. Ryan, restricted by regulations and lack of advertising resources, will find it difficult to compete. As a result, Ryan could potentially lose valuable third party revenues.

APPENDIX B:

Chart Review Protocol

Chart Review # _____

REVISED CHART REVIEW PROTOCOL

I. **Patient Characteristics**

Sex Female Male_____ Race

Date of Birth _____

Type of Insurance
Medicaid_ **SSI**__ Medicare_ Commercial_____ None_____

Managed Care/HMO Enrollee Yes_ **No**_____

Special Population/Medical Needs Identified in Chart
(Note conditions identified during the past 12 months)

	Noted in Records (X)
Pregnant	_____
Homeless	_____
HIV-Positive	_____
Substance Abuse	

Is the client and established user prior to dx leading to entry into pregnancy, HIV, SA, or Homeless program? Y / N

II. **Patient Identifiers**

Same as Chart Record_ If same as master chart, skip to Section III.

Number of Patient Identifiers noted in record _____
(ex. SSN and Medicaid # = 2)

Is there one identifier for this patient that appears on all charts reviewed? YES _ NO _____

If YES, what type of identifier (e.g., SSN, Medicaid #, medical record #)_____

Patient record includes the following charts:

	Yes/No	Location: Same File	Location: Separate	Reviewed (Y/N)
Medical record	_____	_____	_____	_____
Social service record	_____	_____	_____	_____
Case management record	_____	_____	_____	_____
Referral/follow-up records		_____	_____	_____
Other (name)	_____	_____	_____	- -

Chart Review # _____

III. Case **Management**

Does the patient have a single case manager assigned by the agency? Yes No _
If NO, indicate # of case managers and programs to which they are related?_____

Does the record indicate that the patient has a case manager assigned from another agency?
Yes_____ No_____

IF YES, from what type of program is the other case manager(s)?_____

What does the record indicate regarding coordination between case managers?_____

Does the patient have an assigned primary care provider? Yes_ No_____

If YES, MD _____ Mid-level _____ Team

Were clients screened for the following:		Date of most recent screening (if apparent):
TB	_____	_____
HIV	_____	_____
Anergy	_____	_____
STD	_____	_____
Substance abuse	_____	_____
Homelessness	_____	_____
Pregnancy	_____	_____
Mental Health	_____	_____

Chart Review # _____

Case Management Services		
This form is concerned with provision of case management services and coordination of care. **Column 2** ***should be completed with Yes or No (or a date, if requested). Column 3 is for examples and comments: provide descriptive examples of items included in the charts. Attach additional pages, if needed.***		
	Indicate Yes/No	Examples/Comments
CASE MANAGEMENT SERVICES DOCUMENTED IN RECORD		
Assessment and Care Plan		
1st assessment and plan		(Provide date if readily available)
Most recent assessment/plan		(Provide date if readily available)
Note: any discrepancy between date of plan and entry into care or dx of HIV/SA/ homelessness or pregnancy		
COORDINATION OF CARE DOCUMENTED IN RECORD		
Coordination among center-based providers (medical and social services}		
Documentation of internal referrals and follow-up-closed loop		
Coordination with outside providers (medical and social services)		
Documentation of external referrals, follow-up and info given to provider-closed loop		

Chart Review # _____

For Pregnant/Perinatal Patients

I. Descriptive Information

EDC/Delivery Date _____

Enrolled in CPCP _____ (Y / N)

Trimester of entry into prenatal care
1st_____ 2nd_____ 3rd_____

Transferred to another provider/agency during pregnancy?
_____ (Y/N)

Why_____

II. **Services**	Received	Examples/Comments (when ***services are provided on referral, note here the type of agency)***
Medical Tests and Procedures		
Blood Type; Rh		
Rubella		
Sickle cell screen		
HBsAG		
Sonogram(s)		
Amniocentesis		
Provision of AZT (or counseling)		
Documentation of Delivery		enter if applicable
Documentation of postpartum visit		enter if applicable
Documentation of 1st well-child visit		enter if applicable
Enhanced/Enabling Services		
Childbirth education		
Parenting education		
Nutrition counseling		
WIC		
Presumptive eligibility for Medicaid		
Other		

Chart Review # _____

For HIV Patients

1. Descriptive Information		
Eligible for (or enrolled in) HIV-Early Intervention Program? _____ (Y/N) Date _____		
II. Services	Received	Examples/Comments (by referral, to whom)
HIV Early Intervention Services		
HIV status determined (date)		
Completed HIV flow sheets		
Periodic CD (T4) counts and monitoring		
Antiretroviral therapy (AZT)		
Treatment of complications of HIV infections (e.g., opporunistic infections)		
Mental health services		
Referral for specialist medical jet-vices		
Preventive Services		
Influenza vaccine		
Tetanus/diphtheria		
PAP Smear		
Enhanced/Enabling Services		
Counseling - Safer sex/ counseling/testing partner		
Nutrition/food safety		
Ucohol abuse counseling/ referral		
Drug abuse counseling/ referral		
Provision of drug abuse treatment		
Eligibility assistance		
Other		

Chart **Review #** _____

For Homeless Patients

I. **Descriptive** Information

Date Homeless status determined _____

Eligible for (or enrolled in) Homeless Program? _____ (Y/N)

Date eligibility/enrollment occurred. _____

II. Services	Received		Examples/Comments (by referral, by whom)
Tests and Procedures			
TB treatment			
Chronic disease screening, diagnosis and treatment (note any identified disease)			
Dental services			
STD treatment			
Enhanced Services			
Drug abuse counseling and referral			
Alcohol abuse counseling and referral			
Drug or alcohol abuse treatment			
Mental health services			
Crisis intervention			
Enabling Services			
Social support services			
Transportation assistance			
Individual counseling			
Nutrition/Food Banks			
Eligibility assistance (e.g., Medicaid)			
Other			

Chart Review # _____

For Substance Abuse Patients

I. Descriptive Information

Date substance abuse determined _____ Substance abused ____ Alcohol _____IV Drugs ___ Other

Status: _____Active Recovery less than 1 year Recovery more than 1 year

Eligible for (or enrolled in) Substance Abuse/Primary Care Linkage Program _____(Y/N)

Date eligibility/enrollment occurred. _____

II. Services	Received		Examples/Comments (by referral/ by whom)
Substance Abuse Services			
Drug abuse counseling/referral			
Alcohol abuse counseling/referral			
Drug or alcohol abuse treatment			
Mental health services			
Recovery planning			
Crisis intervention			
Preventive tests and additional services			
TB treatment			
Dental services			
STD treatment			
Other preventive tests			
Enabling Services			
Social support services			
Transportation assistance			
Individual counseling			
Nutrition/Food Banks			
Eligibility assistance (e.g., Medicaid)			
Other			